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EPA Region 5 Records Ctr.



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**SITE ASSESSMENT REPORT
FOR
DURAKO PAINT
DETROIT, WAYNE COUNTY, MICHIGAN
TDD S05-9707-008
PAN 7U0801SIXX**



ecology and environment, inc.

International Specialists in the Environment

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TDD S05-9707-008
PAN 7U0801SIXX

September 30, 1997

Prepared for:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Emergency Response Branch
77 West Jackson Boulevard
Chicago, Illinois 60604

Prepared by: Anne E. Hellie Date: 10/8/97
Anne E. Hellie, START Member

Reviewed by: Michael Dieckhaus for Mary J. Ripp Date: 10/8/97
Mary Jane Ripp, START Assistant Program Manager

Approved by: Michael L. Dieckhaus Date: 10/8/97
Michael L. Dieckhaus, START Assistant Program Manager



ecology and environment, inc.

12251 UNIVERSAL, TAYLOR, MICHIGAN 48180, TEL. (313) 946-0900
International Specialists in the Environment

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1. Introduction

On August 11, 1997, the United States Environmental Protection Agency (U.S. EPA) tasked the Ecology and Environment, Inc. (E & E), Superfund Technical Assessment and Response Team (START), under Technical Direction Document (TDD) S05-9707-008, to perform a site assessment at the Durako Paint (Durako) site in Detroit, Wayne County, Michigan. Tasks to be completed included: obtain and review existing site, facility and/or release data provided by U.S. EPA; obtain and review files of state and local authorities, other Federal Agencies, and interested parties; conduct a site visit; document site conditions with written and visual documentation; assess site for immediate threat to public health or the environment, the potential need for a removal action, further investigation, no further investigation, no further action, state referral, and/or referral to other Federal Agencies or U.S. EPA programs; determine site characteristics (populations, sensitive environments, site usage, hydrogeological and meteorological conditions, and other pertinent conditions); determine pollutant dispersal pathways; develop a health and safety plan for field activities; conduct sampling activities on site; schedule/provide for analytical support; perform air monitoring; and perform analytical data validation. These activities were performed at Durako to evaluate the site's threat to human health and the environment based on Title 40 Code of Federal Regulations (CFR) 300.415, National Oil and Hazardous Substances Pollution Contingency Plan (NCP). The START members conducting the site assessment with the U.S. EPA On-Scene Coordinators (OSCs) David Anderson and Jason El-Zein, were Michael Dieckhaus, Anne Hellie, and Jeff Kimble. Photodocumentation of Durako is presented in Appendix A of this report.

2. Background

2.1 Site Description

The Durako site, a former paint product manufacturing facility, is located at 6315 East 7 Mile Road, Detroit, Wayne County, Michigan (42°26'1.7" North, 83°2'19.8" West)(Figure 2-1). The site consists of two properties that are one block apart, on opposite sides of Filer Street (Figure 2-2). The property located at 6315 East 7 Mile Road is approximately 2,100 square feet in area (210 feet by 100 feet). There is a building on this property containing approximately two-thousand four-hundred 55-gallon drums, three large mixing tanks, two copper storage tanks, 14 large upright tanks, hundreds of 1-gallon paint cans, and several 40-gallon plastic drums marked "Pigment." A small yard east of the warehouse contains approximately twenty 55-gallon drums, a semitrailer housing an old automobile, and a loading dock area flooded with water. This property is bordered to the north by an alley, to the west by Mt. Elliott Avenue, to the south by 7 Mile Road, and to the east by Filer Street. Residences are located less than 100 feet to the north of the site and south of 7 Mile Road, on Filer Street. Industrial operations are located north of the alley, directly across Filer Street to the east, and south and west of the site.

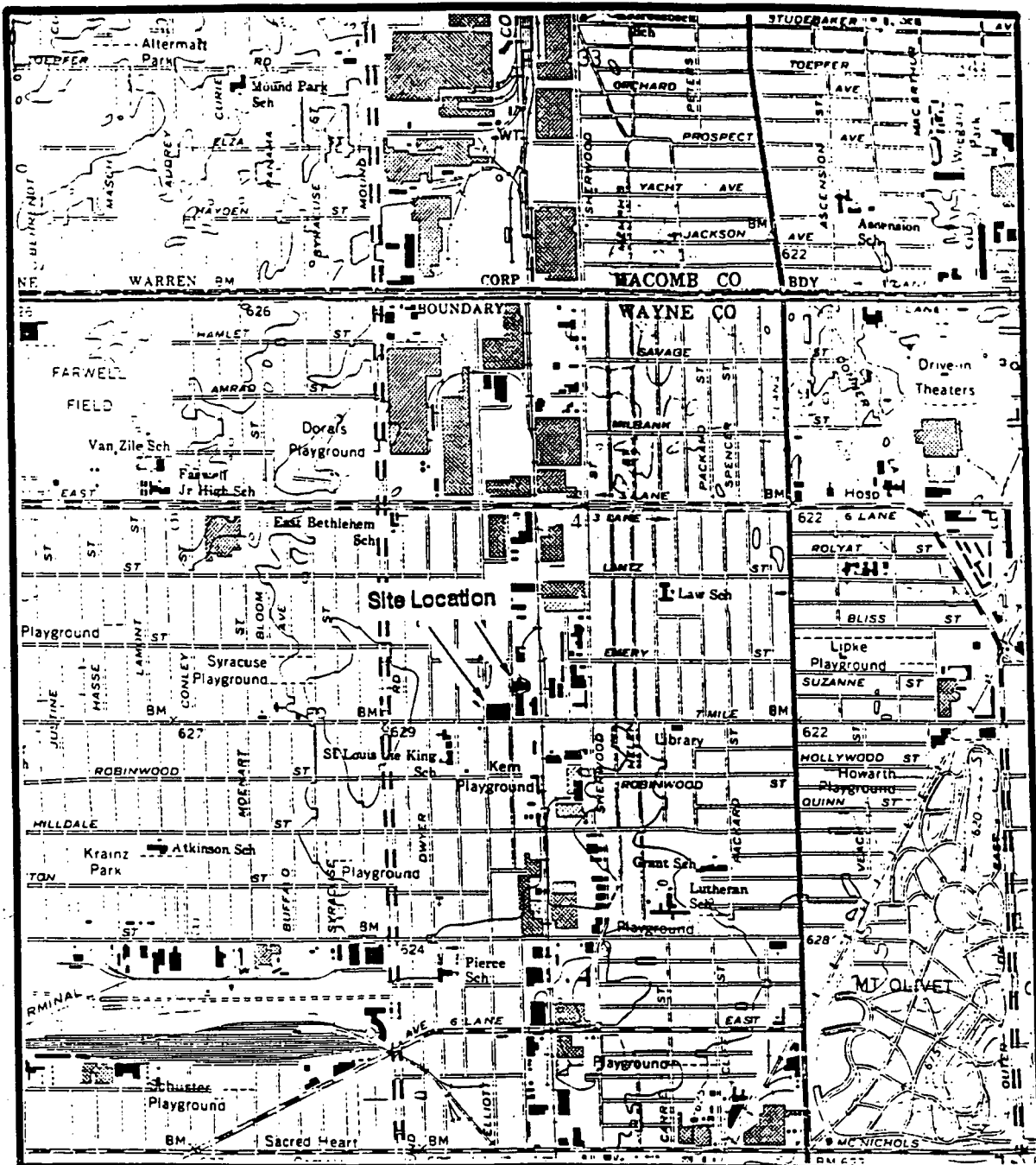
The second property, located approximately 250 feet north of the building property, is situated on the east side of Filer Street. This property is a fenced yard, approximately 8,000 square feet in area (40 feet from north to south, and 200 feet from east to west). The yard contains three-hundred fifty 55-gallon steel drums, 200 polyethylene (poly) 55-gallon drums, 15 square poly tanks, two large mixing tanks, and two abandoned, damaged automobiles. The yard area is bordered to the north by a parking lot, to the west by Filer Street, to the east by Grand Trunk Railroad tracks, and



to the south by a business. A residence is located on the west side of Filer Street. Both parcels of the site are located in a mixed industrial/residential area of Detroit.

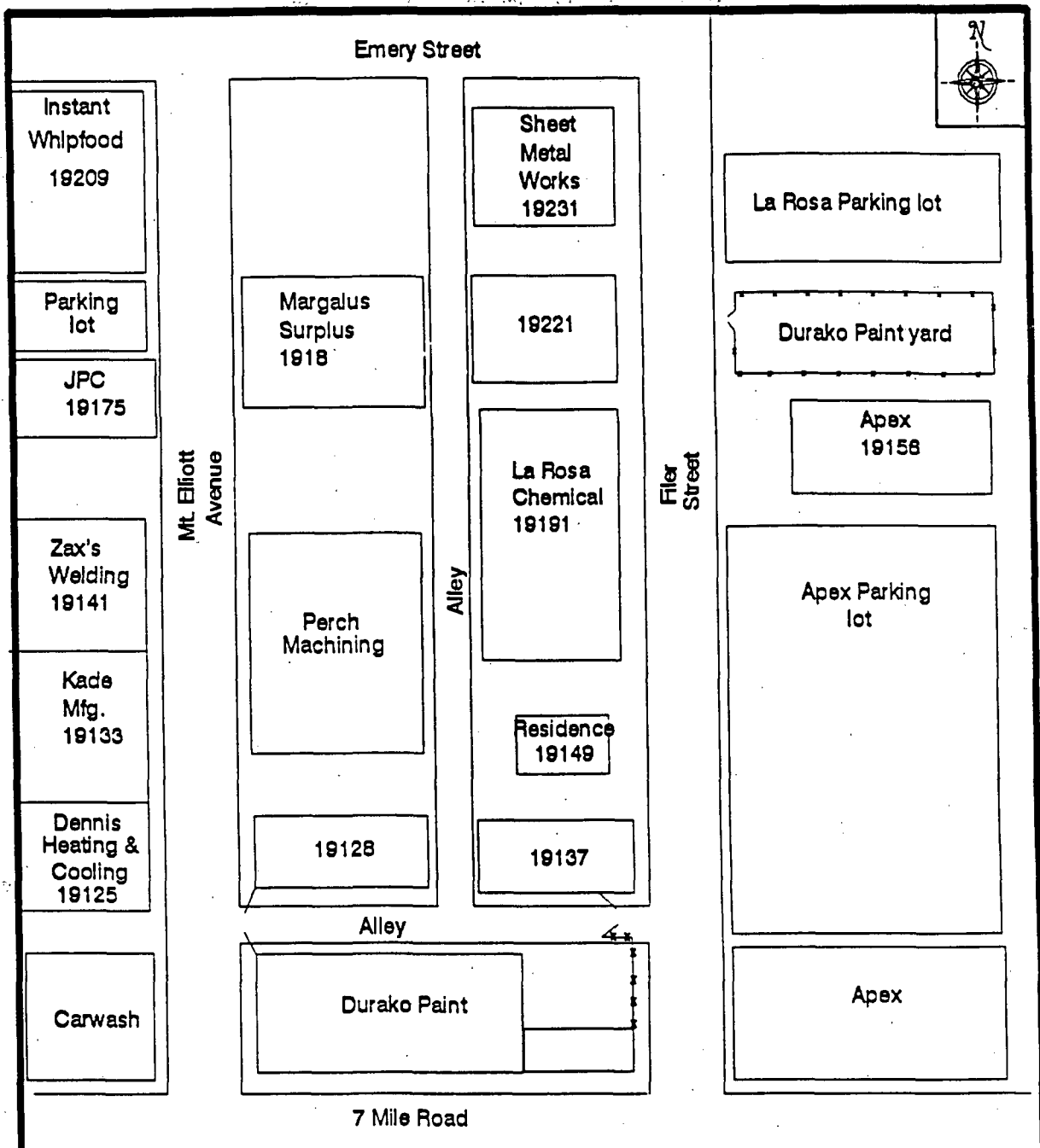
2.2 Site History

On August 19, 1997, an inspection was conducted by the Michigan Department of Environmental Quality (MDEQ) at the Durako facility to evaluate compliance of the facility with federal and state regulations. Robert Weed, President of Durako Paint and Color Company (DPCC), was alerted to MDEQ regulations prohibiting storage of a hazardous waste for greater than 90 days without a permit. Paint-related materials were found on site by MDEQ, but were not considered to be waste materials because Weed indicated that the materials were to be reused within the calendar year. A response letter assuring that the property had been completely cleared of all excess liquid materials was received by MDEQ from Paul Jarvi, Production Manager of Durako Paint Company. The Durako facility ceased operations in 1989. Two of the three buildings, originally comprising the Durako plant, have been sold on land contract or leased to other businesses.

On December 6, 1989, the MDEQ Environmental Response Division (ERD) received notification from Mark Hilty of Hunter/Keck Consultants, that there was a confirmed release from an underground storage tank on the Durako property. A letter from MDEQ notifying DPCC of abatement requirements, procedures, and deadlines was sent to Weed. MDEQ conducted an inspection of the facility on May 27, 1993. MDEQ sent a warning letter to Weed on June 7, 1993, alerting DPCC of violations of federal and state regulations at the Durako facility and cleanup requirements. On June 25, 1997, MDEQ responded to a complaint at the Durako site and observed approximately three-thousand 55-gallons drums of paint-related materials located inside the Durako building. Property ownership has reverted to the State of Michigan due to nonpayment of property taxes. On July 9, 1997, MDEQ requested U.S. EPA assistance to assess and clean up the site.



				<p>ecology and environment, inc. Superfund Technical Assessment and Response Team Region 5</p>	
TITLE		Site Location Map		FIGURE # 2-1	
SITE		Durako Paint		SCALE 1:24,000	
SOURCE/DATE		CITY		STATE	
USGS 7.5 Minute Series Topographic Map Highland Park, MI, 1983		Detroit		Michigan	
				TDD # S05-9707-008	



Legend *—* Barbed wire fence > Gate		ecology and environment, inc. Superfund Technical Assessment and Response Team Region 5	
TITLE Site Features Map		FIGURE # 2-2	
SITE Durako Paint		SCALE Not to scale	
CITY Detroit	STATE Michigan	TDD # S05-9707-008	
SOURCE Ecology and Environment, Inc.		DATE August 28, 1997	

3. Site Activities

3.1 Site Assessment Activities

On August 11, 1997, the U.S. EPA OSCs and START performed a site assessment at the Durako site. The MDEQ ERD representative, Ray Spaulding, was also present. The initial site reconnaissance of the building property was conducted around the perimeter of the site in level D personal protective equipment (PPE). During the reconnaissance, the U.S. EPA OSCs and START observed that access to the property at 6315 7 Mile Road (referred to as the Durako facility) was limited by a chain-link fence and gate across the alley north of the building. The gate was secured with a padlocked chain. There were gaps between the building and gate post. OSC Anderson obtained a key to the lock from the neighboring business to the north. A yard, containing approximately twenty 55-gallon drums and an abandoned semitrailer, is located to the east of the building. According to Ray Spaulding, the semitrailer contains a car belonging to Robert Weed. The loading dock in the yard was flooded with water (Figure 3-1). Access to a majority of the building was available through a large bay door on the north side of the building. Other secured exterior doors on the north and west sides of the building provided access to the building. Cement surrounding a sewer drain in the alley north of the building was stained with paint.

The second property is an uncovered yard to the north of the Durako facility, and on the east side of Filer Street. Approximately three-hundred-fifty 55-gallon steel drums, 200 empty poly drums, 14 square poly tanks, two large mixing tanks, and two abandoned automobiles were observed in the yard (Figure 3-2). Steel drums were stacked two high on pallets on the eastern side of the yard. Labels on several of the drums read, "Silver Met." The poly tanks were stacked on their sides on the north side of the yard. The

square poly tanks appeared to contain a black tar material. This property was surrounded by a chain-link fence and an open gate on the west side. The gate was secured with a padlock by the OSCs.

START performed air monitoring activities inside the Durako building in level B PPE. No readings above background were obtained in the breathing zone. The reconnaissance in the building revealed that the roof of the building was leaking rainwater into the facility. A large hole on the southeast corner of the tank room allowed rain water to enter (Figure 3-1). Limited access to the building was obtained from the alley through a large bay door that led to the entry room. The entry room contained two large upright tanks and a stained black cork-like material on the floor. The small drum room to the east of the entry room contained approximately three-hundred-fifty 55-gallon steel drums. The drums were stacked three high and two deep on pallets along the south wall, and 14 drums across and six deep on the east wall. All of the drums were tightly stacked, and drums near the walls were not accessible. Drums at the southwest corner of this room appeared relatively new and were labeled, "Silver Met, flammable liquid, class 3." The majority of the other drums were deteriorated and did not contain legible labels. Many of the drums were rusting, and some were beginning to collapse under the weight of the drums stacked above. Bulging drums were observed in this room, and there were several 1-gallon paint cans. Some of the 1-gallon cans, marked "Decorative Elastic Coating," were scattered on the floor.

The office drum room, containing approximately thirty-five 55-gallon drums stacked two high, was located to the west of the small drum room. One of the drums was open and tipped. This drum was approximately one-third full of hardened paint material. The large drum room, located north of the office drum room, contained approximately 2,000 drums stacked three high. The drums were tightly stacked, and most of the drums were inaccessible. The drums appeared to be deteriorated, and some of them were rusted and collapsing. A few of the drums were labeled. One of the drums on the south side of the room was leaking a clear liquid. There were approximately one-hundred-seventy 40-gallon poly drums filled with paint pigment. One-gallon paint containers were located on some of the drum stacks. The large drum room was accessible via an exterior door on the west side of the building. A platform covered the northwest corner of the room (Figure 3-3). Five 55-gallon drums (one marked

Tetrahydrofurfuryl alcohol), hundreds of 1-gallon paint cans, and bags marked "Talc," were stored on the platform. Three mixing tanks, two empty copper storage tanks, and thirty-two 40-gallon pigment containers were located beneath the platform. Dried paint and resins and an unidentified liquid were present on the floor beneath the platform. The tank room, a room located on the west side of the building, contained two 4,500-gallon tanks and twelve 4,000-gallon tanks. The tank room was accessible via an exterior door on the western side of the building. The floor in the tank room was covered with hardened paint and resin and an unidentified liquid. This liquid was migrating out of the exterior door from the tank room, and migrating off site as rainwater entered from the roof leak. The boiler room, which was accessible through an exterior door on the west side of the building, contained two 25-gallon containers marked, "Phosphoric Acid 75%, Corrosive."

3.2 Sampling Activities

On August 11, 1997, START sampled six 55-gallon drums, two 4000-gallon tanks, and two materials from the floor of the building. The sampling and photodocumentation of sampling activities were conducted in level B PPE. Organic vapors in the headspace of 55-gallon drums were measured with a photoionization detector (PID), and percent oxygen, lower explosive limit, hydrogen sulfide, and carbon monoxide were measured with a Mine Safety Appliances (MSA) Passport meter.

START sampled two 55-gallon steel drums in the small drum room (Figure 3-4). Sample DPD-1 was collected from a drum labeled, "Silver Met, flammable liquid, class 3." The drum, located on the south wall of the room, was filled with a viscous silver liquid. PID readings from the headspace were 1,863 units above background, and no readings above background were obtained with the PASSPORT. Sample DPD-2 was a grey, thick sludge and liquid collected from a deteriorated blue drum with no label. This drum was stacked on top of two drums on the east side of the room. PID readings from the headspace were less than 2,500 units above background.

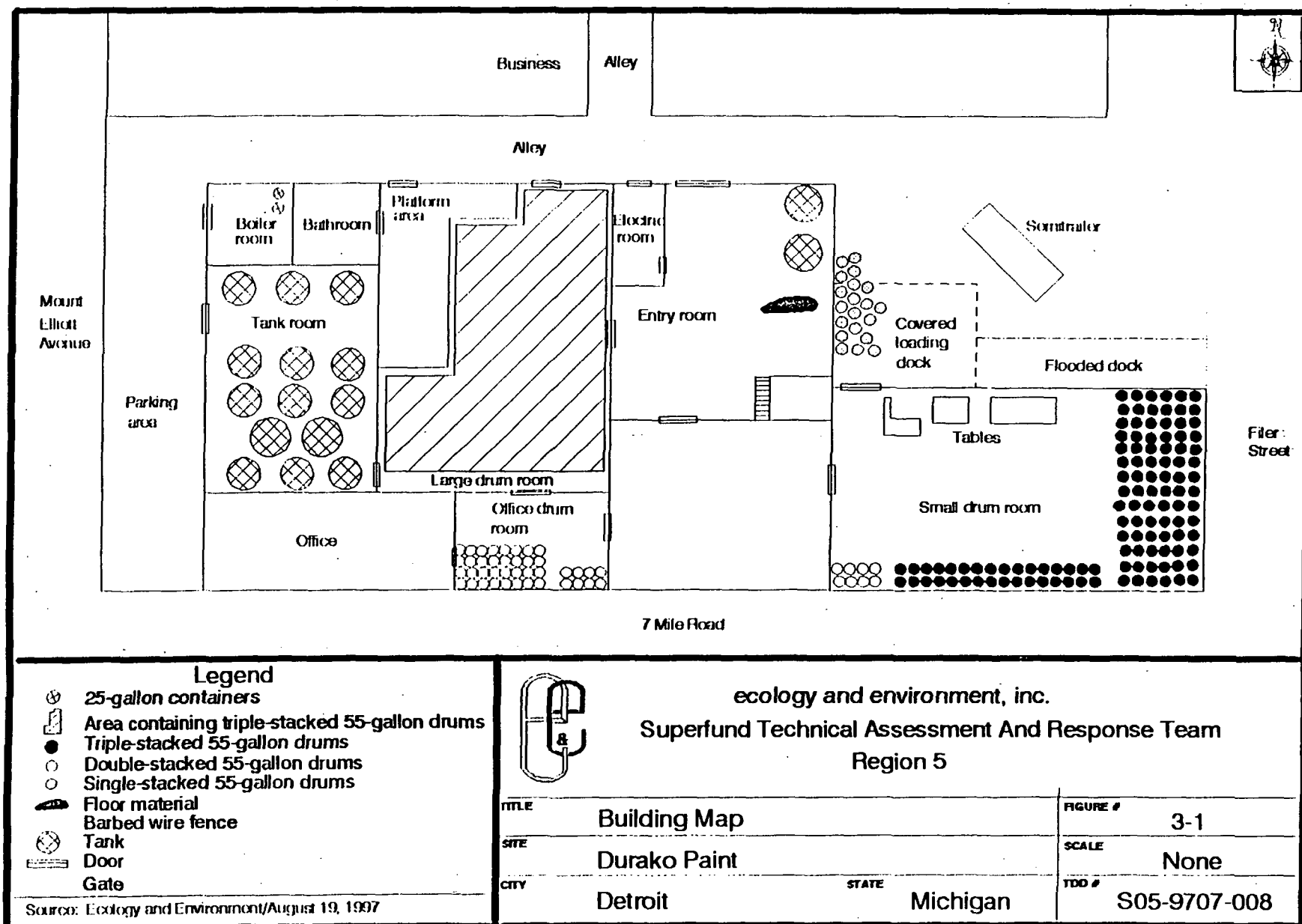
Sample DPF-1 was a brown and black solid collected from the floor on the east side of the entry room. A second floor sample, sample DPF-2, was a white, green, and black solid collected from the floor under the platform of the large tank room.

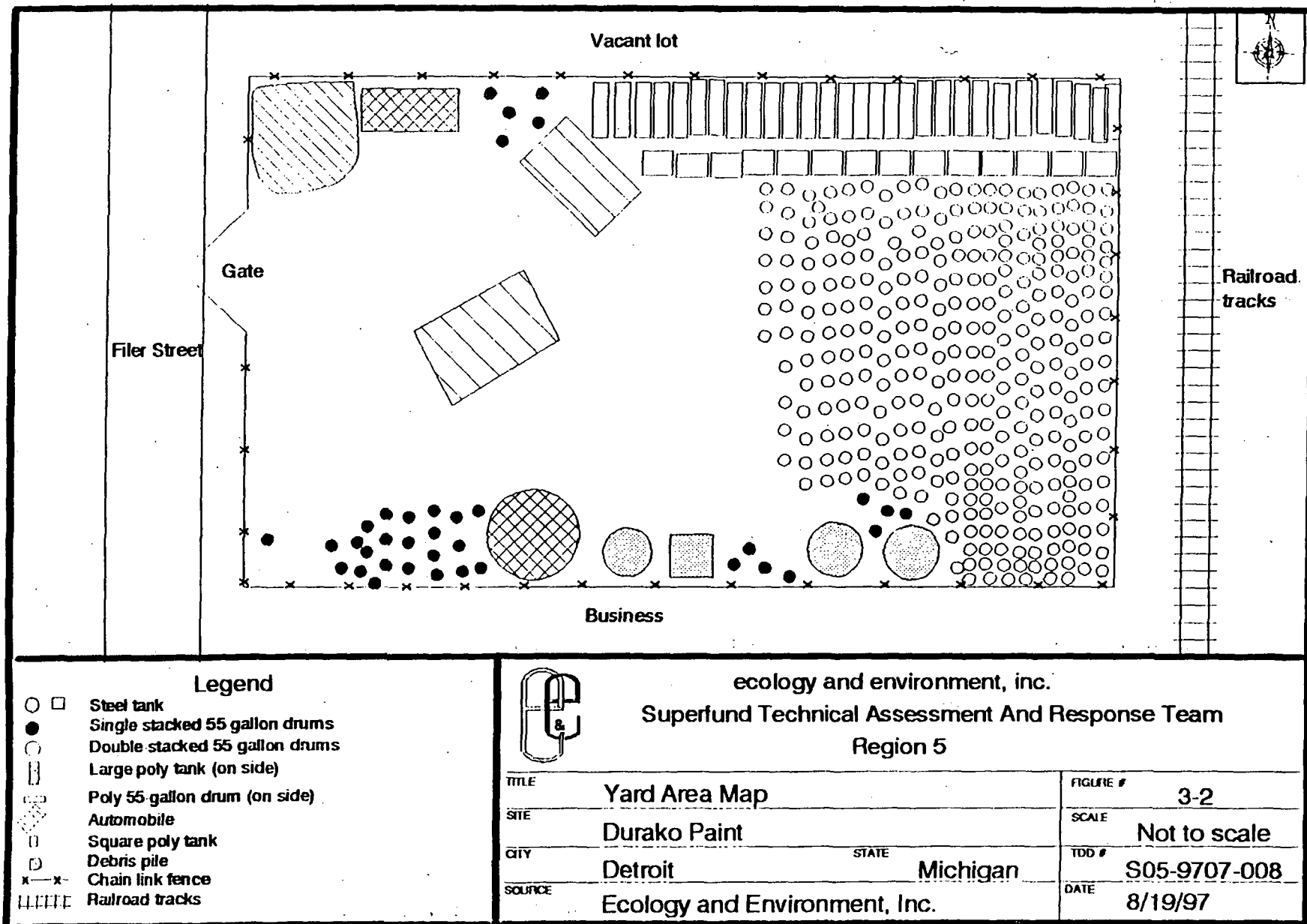
Sample DPD-3 was collected from a 25-gallon container labeled "Phosphoric Acid 75%, Corrosive," located in the boiler room. A pH strip dipped in the liquid indicated the pH to be 1 standard unit.

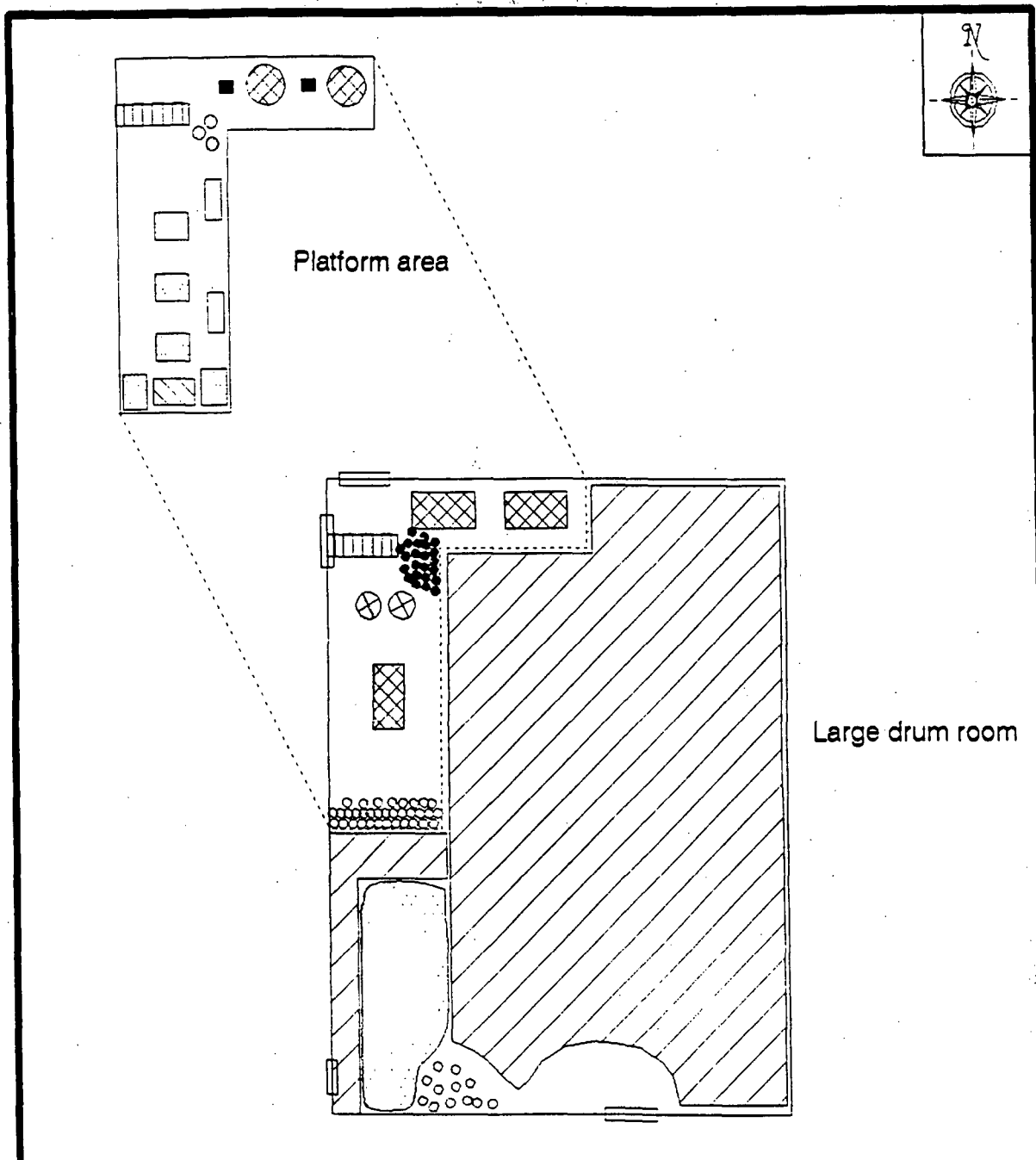
Samples were collected from two 4,000-gallon tanks in the tank room. Sample DPT-1 was collected from a tank containing approximately 2 feet of thick, orange sludge. Sample DPT-2 was collected from a tank filled within two inches of the top with a brownish-black liquid.

Samples DPD-4, DPD-5, and DPD-6 were collected from 55-gallon steel drums located in the large drum room (Figure 3-5). Sample DPD-4 was a clear, colorless liquid collected from a drum located on the platform and labeled, "Tetrahydrofurfuryl alcohol." PID readings from the headspace were 60 units above background. Sample DPD-5 was a rust-colored liquid mixed with chunks of white- and rust-colored solid collected from an unlabeled drum. This drum, stacked on top of two other drums, was accessible from the platform. PID readings from the drum headspace were 1,400 units above background. Sample DPD-6, a viscous silver material and a thin yellow liquid, was collected from a drum stacked on top of two drums. This drum was accessible from the platform. PID readings from the drum headspace were 160 units above background.

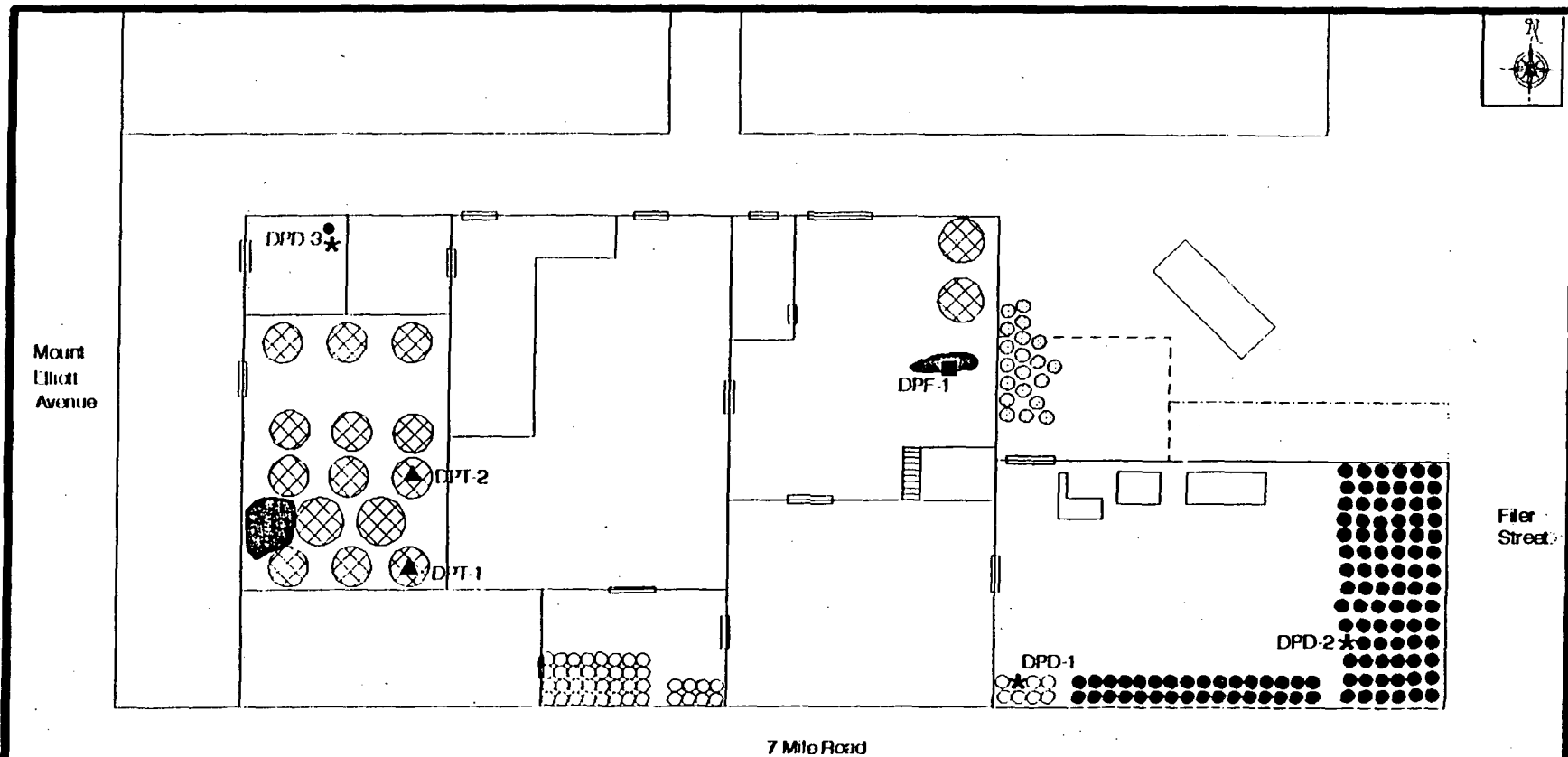
START photodocumented the sample locations and any markings on the sampled containers. Company names and information from labels were documented from several drums and bags of material that were not sampled. START completed documentation of the two properties, and U.S. EPA and START secured the site and demobilized.







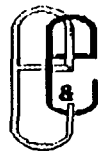
Legend 		 ecology and environment, inc. Superfund Technical Assessment and Response Team Region 5	
TITLE Large Drum Room Map		FIGURE # 3-3	
SITE Durako Paint		SCALE None	
CITY Detroit	STATE Michigan	TDD # S05-9707-008	
SOURCE Ecology and Environment, Inc.		DATE 8/19/97	



Legend

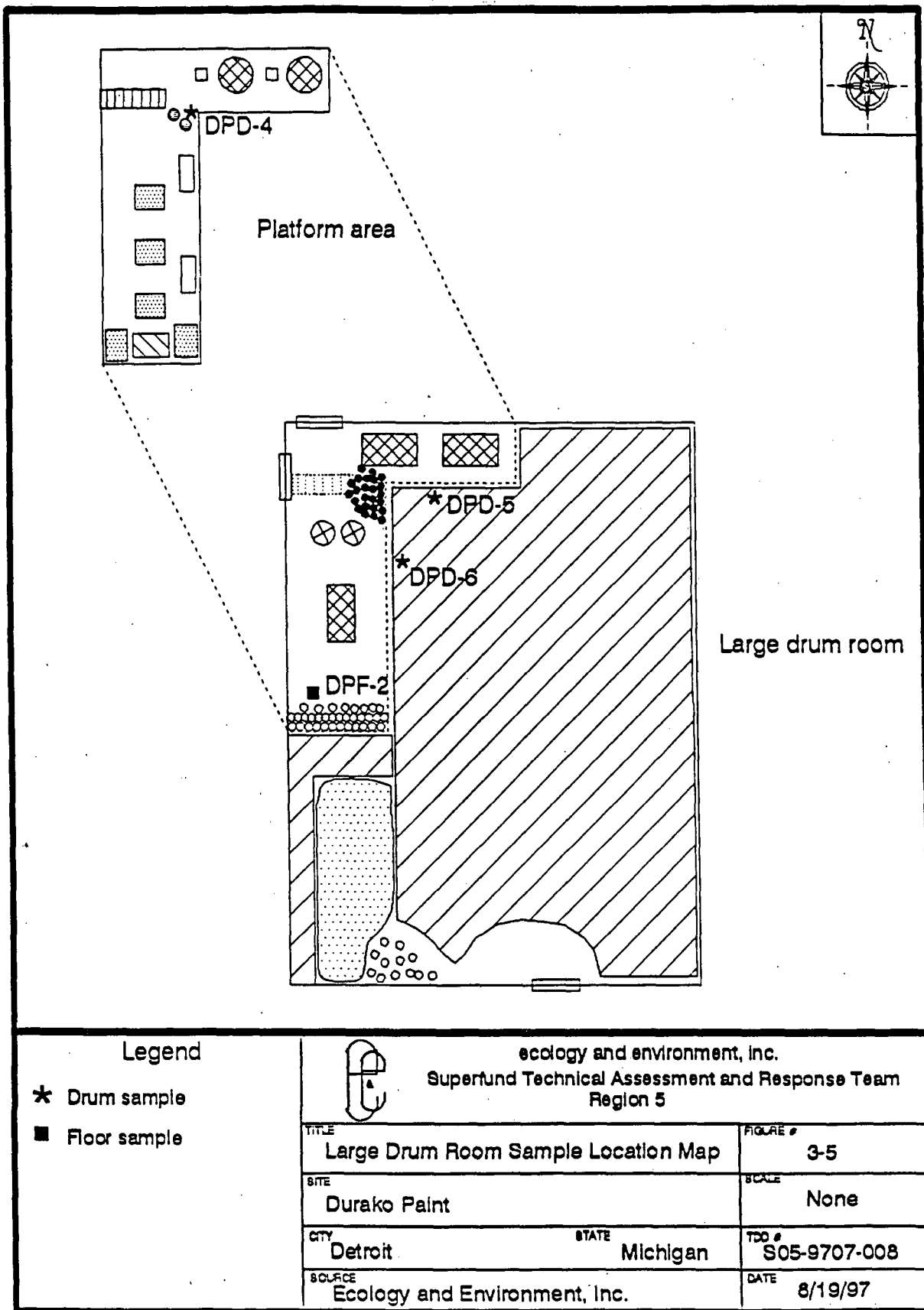
- * Drum sample
- ▲ Tank sample
- Floor sample

Source: Ecology and Environment/August 27, 1997



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Superfund Technical Assessment And Response Team
Region 5

TITLE	Facility Sample Location Map	FIGURE #	3-4
SITE	Durako Paint	SCALE	None
CITY	Detroit	STATE	Michigan
		TDD #	S05-9707-008



4. Analytical Results

On August 11, 1997, START collected grab samples from five 55-gallon steel drums, one 25-gallon container, two tanks, and two areas of floor material. All of the samples from the site were transported to Encotec, Inc., Ann Arbor, Michigan, for analyses under analytical TDD S05-9707-806. The samples were analyzed in accordance with the U.S. EPA Solid Waste (SW-846) Method 9040 for the determination of pH; Method 1010 for the determination of flash point (ignitability); Methods 6010, 7471, and 7741, for the determination of total Michigan metals; Methods 6010 and 7470 for the determination of toxicity characteristic leaching procedure (TCLP) Michigan metals; Method 8260 for the determination of total volatile organic compounds (VOCs), and Method 8270 for determination of total semivolatile organic compounds (SVOCs).

Samples collected from the tanks (samples DPT-1 and DPT-2) were analyzed for total VOCs, total SVOCs, total Michigan metals, and ignitability. Samples collected from the 55-gallon steel drums (samples DPD-1, DPD-2, and DPD-4 to DPD-6) were analyzed for TCLP Michigan metals, total VOCs, total SVOCs, and ignitability. Sample DPD-3, collected from a 25-gallon container, was analyzed for pH. Samples collected from floor material (samples DPF-1 and DPF-2) were analyzed for total Michigan metals, and TCLP metals. A summary of analytical results from samples are presented in Tables 4-1, 4-2, and 4-3.

Analytical results from both of the tank samples indicated the presence of VOCs and a flash point less than 73°F. The second tank sample (sample DPT-2) contained SVOCs, total Michigan metals, and total xylenes.

Analytical results from drum and floor samples DPD-2, DPD-6, DPF-1, and DPF-2, indicated the presence of VOCs and total Michigan metals. Sample DPF-2 indicated the presence of TCLP lead. Elevated levels of total xylenes were

reported in samples DPD-1, DPD-5, and DPD-6. SVOCs were present in samples DPD-1, DPD-2, and DPD-3. Flash points for samples DPD-1, DPD-2, and DPD-5 were less than 73°F, and the flash point for sample DPD-6 was 77°F. The pH from sample DPD-3 was less than 1 standard unit. Data validation memoranda and complete analytical results for all samples are presented in Appendix B.

Table 4-1

VOLATILE ORGANIC COMPOUND ANALYTICAL RESULTS
 DURAKO PAINT
 DETROIT, MICHIGAN
 AUGUST 11, 1997
 (units = mg/kg)

Parameters	Sample Designation									
	DPD-1	DPD-2	DPD-3	DPD-4	DPD-5	DPD-6	DPF-1	DPF-2	DPT-1	DPT-2
Acetone	99.0	130.0	NR	4.8	46	22	NR	NR	ND	120
Benzene	ND	ND	NR	ND	3.9	ND	NR	NR	ND	5
2-Butanone (MEK)	8,600	580	NR	ND	470	280	NR	NR	1.1	830
1,2-Dichloropropane	8.6	ND	NR	ND	22	9	NR	NR	1.2	9.1
Ethylbenzene	10,000	ND	NR	11	ND	1,200	NR	NR	710	4,000
2-Hexanone	10,000	ND	NR	ND	ND	ND	NR	NR	ND	ND
4-Methyl-2-pentanone (MIBK)	1,400	ND	NR	ND	4,000	130	NR	NR	ND	1,800
Methylene chloride	ND	ND	NR	ND	10	ND	NR	NR	0.57	4.8
Styrene	ND	190	NR	ND	ND	ND	NR	NR	ND	ND
Tetrachloroethene	ND	ND	NR	ND	3.9	ND	NR	NR	ND	6
Toluene	2,300	10,000	NR	1.9	2,700	480	NR	NR	190	4,300
Trichloroethene	ND	ND	NR	ND	3.3	ND	NR	NR	ND	7.2
Total xylenes	2,900	47	NR	56	20,000	2,600	NR	NR	1,500	8,000

Key: ND = Not detected.
 NR = Test not run.
 mg/kg = Milligrams per kilogram.

Source: Laidlaw Environmental/Encotec, Inc., 3985 Research Park Dr., Ann Arbor, MI 48108.
 Analytical TDD S05-9707-806.

Table 4-2

SEMIVOLATILE ORGANIC COMPOUND, FLASH POINT, AND pH ANALYTICAL RESULTS

DURAKO PAINT

DETROIT, MICHIGAN

AUGUST 11, 1997

(units = mg/kg unless otherwise noted)

Parameters	Sample Designation									
	DPD-1	DPD-2	DPD-3	DPD-4	DPD-5	DPD-6	DPF-1	DPF-2	DPT-1	DPT-2
2,4-Dimethylphenol	ND	430	NR	ND	120	ND	NR	NR	ND	ND
Bis (2-ethylhexyl) phthalate	ND	ND	NR	ND	ND	ND	NR	NR	ND	110
2-Methylnaphthalene	ND	ND	NR	ND	ND	ND	NR	NR	ND	590
Benzo(a) anthracene	ND	ND	NR	ND	ND	ND	NR	NR	ND	ND
Naphthalene	140	ND	NR	ND	380	ND	NR	NR	ND	240
pH (s.u.)	NR	NR	<1.0	NR	NR	NR	NR	NR	NR	NR
Flash point (°F)	<73	<73	NR	170	<73	77	NR	NR	<73	<73

Key: ND = Not detected.

NR = Test not run.

mg/kg = Milligrams per kilogram.

s.u. = Standard units.

Source: Laidlaw Environmental/Encotec, Inc., 3985 Research Park Dr., Ann Arbor, MI 48108.
 Analytical TDD S05-9707-806.

Table 4-3

TCLP AND TOTAL MICHIGAN METAL ANALYTICAL RESULTS
 DURAKO PAINT
 DETROIT, MICHIGAN
 AUGUST 11, 1997
 (units = mg/kg unless otherwise noted)

Parameters	Sample Designation									
	DPD-1	DPD-2	DPD-3	DPD-4	DPD-5	DPD-6	DPF-1	DPF-2	DPT-1	DPT-2
Arsenic	ND	ND	NR	ND	ND	ND	ND	12	ND	ND
Barium	ND	ND	NR	ND	ND	ND	50	2,900	ND	ND
Cadmium	ND	ND	NR	ND	ND	ND	ND	1.4	ND	ND
Chromium	ND	68	NR	ND	ND	8.1	ND	66	ND	ND
Copper	ND	ND	NR	ND	ND	ND	ND	15	ND	ND
Lead	ND	300	NR	ND	ND	100	4.9	360	ND	4.8
Mercury	ND	ND	NR	ND	ND	0.49	ND	140	ND	0.44
Zinc	ND	63	NR	ND	ND	ND	12	400	ND	5.5
TCLP Lead (mg/L)	NR	NR	NR	NR	NR	NR	ND	0.14	NR	NR

Key: ND = Not detected.

NR = Test not run.

mg/kg = Milligrams per kilogram.

mg/L = Milligrams per liter.

TCLP = Toxicity characteristic leaching procedure.

Source: Laidlaw Environmental/Encotec, Inc., 3985 Research Park Dr., Ann Arbor, MI 48108.
 Analytical TDD S05-9707-806.

5. Potential Threats

The site assessment at the Durako site was conducted to evaluate the threat to public health and the environment posed by the potential for imminent release of hazardous substances from the site.

Conditions at the Durako site present an imminent and substantial endangerment to public health, welfare, or the environment based upon factors set forth in the NCP, 40 CFR Section 300.415 (b)(2). These factors include:

- (i) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants. Drums labeled, "Corrosive" and "Flammable" were observed in the Durako building and in the yard. Analytical results indicated some of these drums have flash points less than 73°F. Drums containing flammable liquids were stored in close proximity to drums with "corrosive" labels in the yard. Dried paint-related floor material, containing elevated levels of cadmium, presents a contact hazard for humans or animals entering the facility. Drums in the facility were stacked two or three high, and most of the drums in the yard were stacked two high. The Durako facility is fenced, and the gate at the alley is padlocked. No security is present, and there are gaps between the gate post and the building, through which trespassers or vandals might enter the alley and building. Doors on the north side of the building open to the alley. The neighboring businesses have keys to the gate on the alley, and wood is being stored on site.
- (iii) Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers that may pose a threat of release. Drums labeled, "Corrosive" and "Flammable" were observed in the Durako building and in the yard. Some of the sampled drums had flash points less than 73°F. Acid with a pH of less than 1 is stored in 25-gallon containers in the facility. The tank room of the facility contains 14 tanks that have varying amounts of materials. Samples of some tank material have elevated levels of total xylenes. Pipes to these tanks appeared deteriorated, and some of the connections have been removed. A drum, leaking a liquid, was observed in the large drum room. A

bulging drum was observed in the small drum room. Some drums in the facility are deteriorated, and may collapse and cause drums stacked above them to fall and rupture. The deteriorated condition of drums creates the threat of release of their contents into the environment.

- (v) Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released. Drums in the yard are stored outside and exposed to the weather, and many appear rusted and deteriorated. Seasonal temperature fluctuations cause the material in the containers to freeze and thaw. Freezing and thawing causes the contents to expand, and the containers to bulge and potentially rupture. Drums in the facility are exposed to rainwater leaking through the roof. An open-top drum was observed in the drum office area. This and any other open-top drums could overflow if filled with rainwater and release their contents. A large hole in the ceiling of the tank room allows rainwater to drain into the room and floor material and any material leaked from deteriorating tanks to wash through the doorway and off site. Rainwater from the floor was observed exiting the door of the tank room during the site assessment.
- (vi) Threat of fire or explosion. Drums marked, "Flammable" and "Corrosive" were stored next to each other in the yard. Some of the drums, labelled "flammable," have flash points less than 73°F. Some drums and containers are not labelled, and their contents have not been identified. The arrangement of incompatible and unknown materials in the facility and yard creates the threat of materials mixing and potentially reacting violently. The reaction may cause a fire, explosion, or toxic vapors to be released. Paint-related material on the floor of the facility may be combustible or flammable.

6. Summary

Observations documented during the Durako site assessment indicate that the conditions constitute an imminent and substantial endangerment to public health and welfare. This conclusion is based upon observations by U.S. EPA and START, as evaluated against the criteria set forth in the NCP.

Based upon analytical results from samples collected, observations, and information provided to START, the materials in several 55-gallon drums, tanks, and small containers are RCRA hazardous substances and wastes, with the characteristics of corrosivity and ignitability. Residences are located in close proximity to both the facility and yard area. The site is not secured, and violations of storage regulations have been documented in the facility's history.

Based upon observations during the site assessment, the majority of drums, tanks, and small containers on site contain paint related-materials and other liquids and sludges, and the 5-gallon containers in the boiler room contain strong acid. The drums and tanks in the yard area are located in areas without any containment. Based on the threat posed by materials on site, the removal of material from the drums and tanks; the removal of drums and containers; the removal of tanks and associated hardware (hoses, pipes, and catwalks); the removal of contaminated surfaces in the facility; and the possible excavation of soil/material in the yard area is recommended to eliminate the immediate threat. An extent of contamination study may be necessary to determine soil contamination beneath the facility and in the yard area.

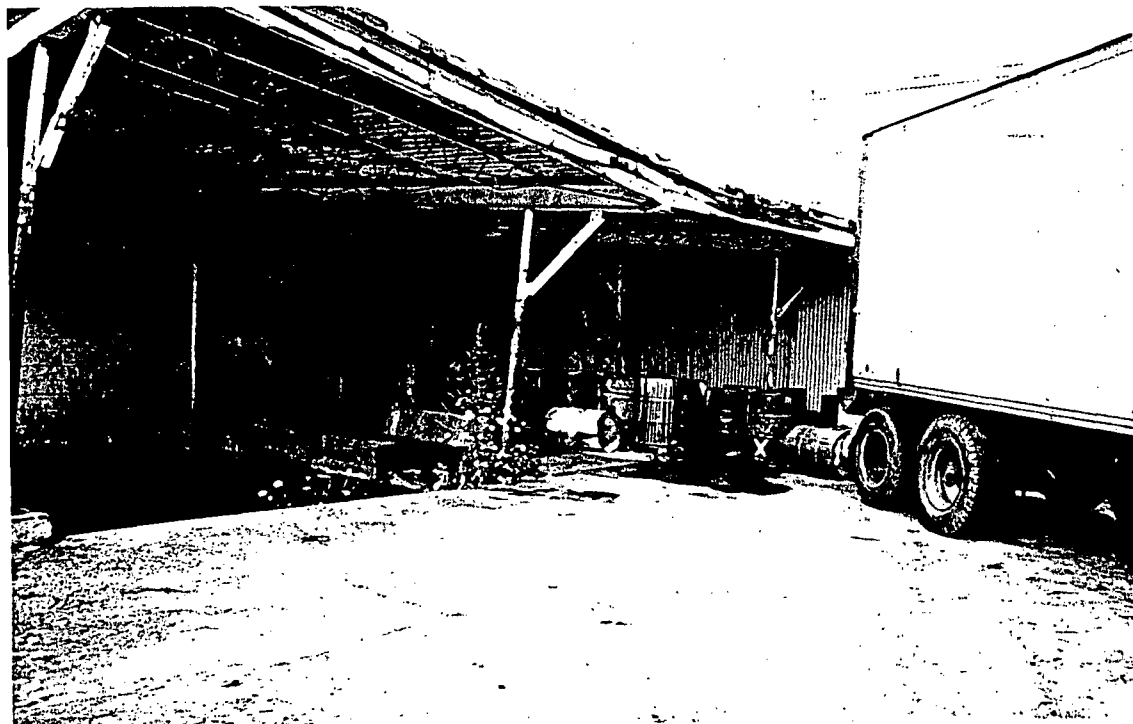
Appendix A

Photodocumentation



Site: Durako Paint
 Photo No: 1 (R1F17)
 Direction: Southwest
 Camera: Minolta
 Photographer: M. Dieckhaus

Date: August 11, 1997
 Subject: North and east side of Durako building.



Site: Durako Paint
 Photo No: 2 (R1F18)
 Direction: Southwest
 Camera: Minolta
 Photographer: M. Dieckhaus

Date: August 11, 1997
 Subject: Drums in loading dock area on east side.



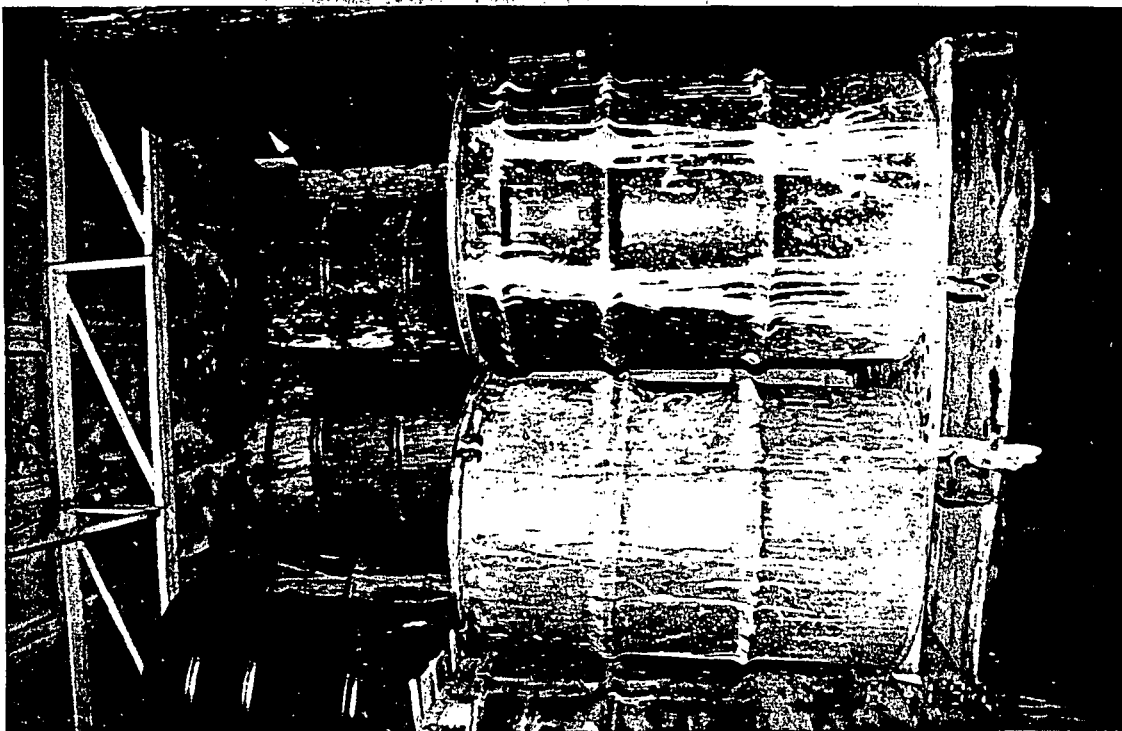
Site: Durako Paint
 Photo No: 5 (R1F21)
 Direction: East
 Camera: Minolta
 Photographer: M. Dieckhaus

Date: August 11, 1997
 Subject: Drums stacked three high along
 walls of the small drum room.



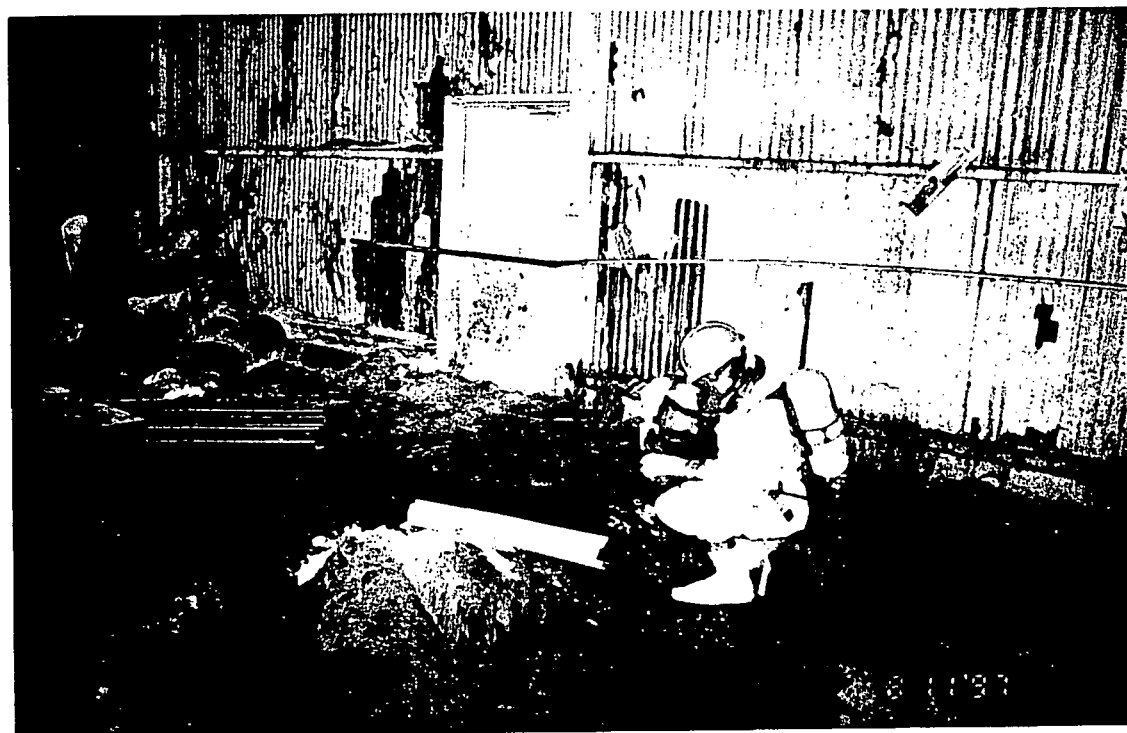
Site: Durako Paint
 Photo No: 6 (R1F22)
 Direction: South
 Camera: Minolta
 Photographer: M. Dieckhaus

Date: August 11, 1997
 Subject: Drums marked "Silver Met
 (flammable)" stacked three high along
 south wall of the small drum room.



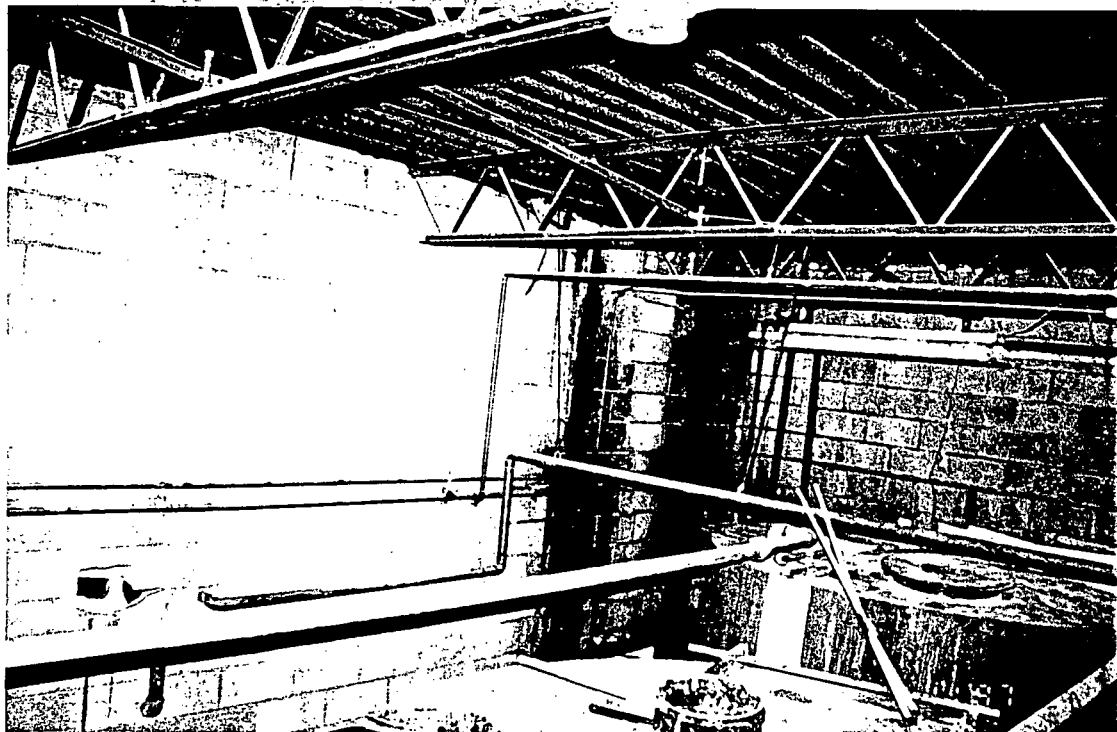
Site: Durako Paint
 Photo No: 9 (R2F1)
 Direction: East
 Camera: Minolta
 Photographer: M. Dieckhaus

Date: August 11, 1997
 Subject: Unlabelled drum from which sample
 DPD-2 was collected in small drum room.



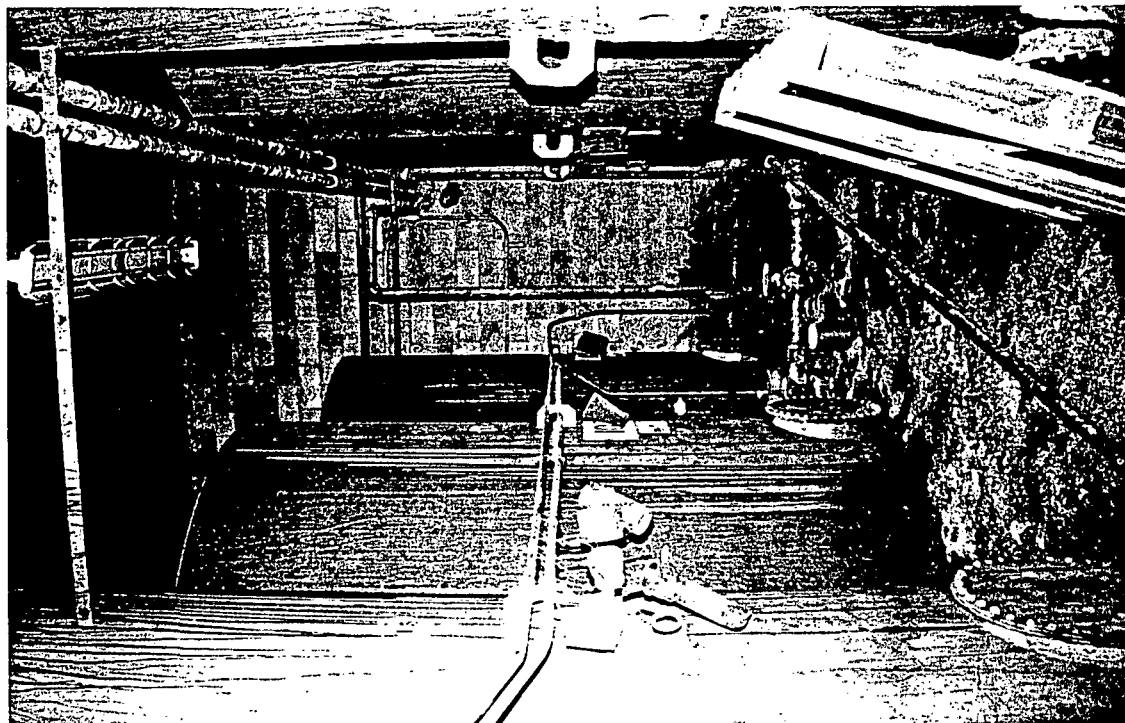
Site: Durako Paint
 Photo No: 10 (R2F2)
 Direction: East
 Camera: Minolta
 Photographer: M. Dieckhaus

Date: August 11, 1997
 Subject: START collecting sample DPF-1
 from a solid on the floor of the entry
 room.



Site: Durako Paint
Photo No: 13 (R2F5)
Direction: Southeast
Camera: Minolta
Photographer: M. Dieckhaus

Date: August 11, 1997
Subject: Rainwater leaking through a hole
in southeast corner of the roof of tank
room.



Site: Durako Paint
Photo No: 14 (R2F6)
Direction: East
Camera: Minolta
Photographer: M. Dieckhaus

Date: August 11, 1997
Subject: Aisle in tank room. Note
material on floor of the room.



Site: Durako Paint
 Photo No: 17 (R2F10)
 Direction: South
 Camera: Minolta
 Photographer: M. Dieckhaus

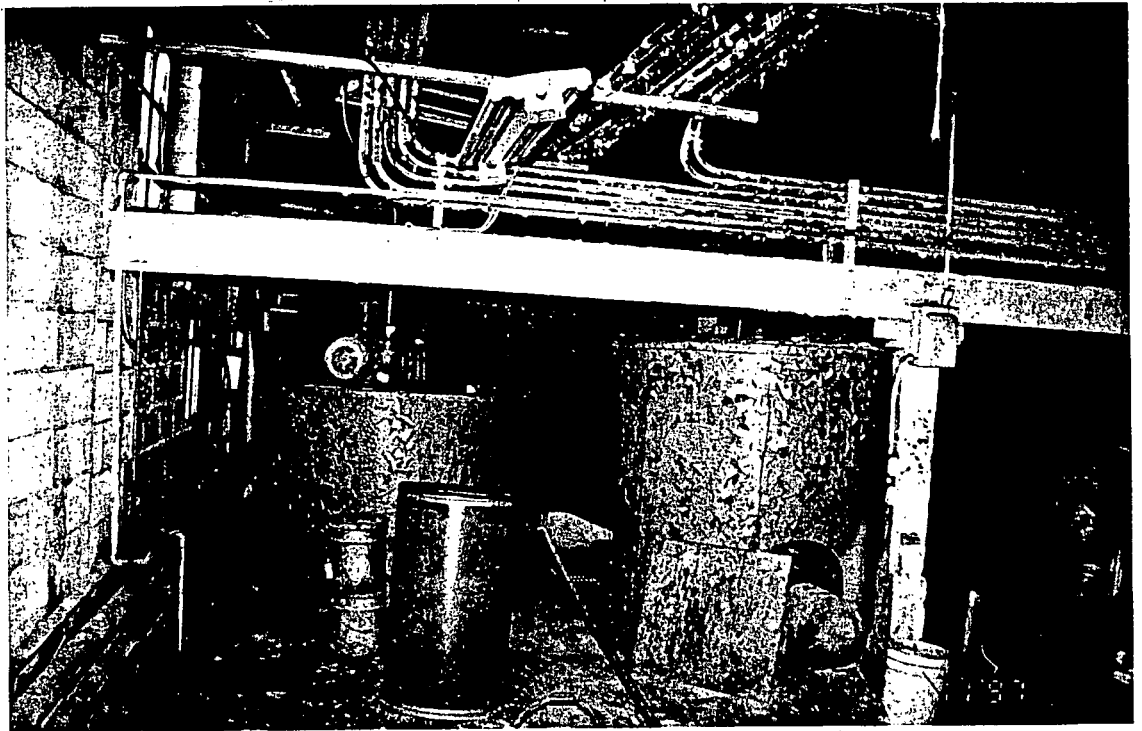
Date: August 11, 1997
 Subject: Stacked drums and containers on
 the southwest side of the large drum room.



Site: Durako Paint
 Photo No: 18 (R2F11)
 Direction: East
 Camera: Minolta
 Photographer: M. Dieckhaus

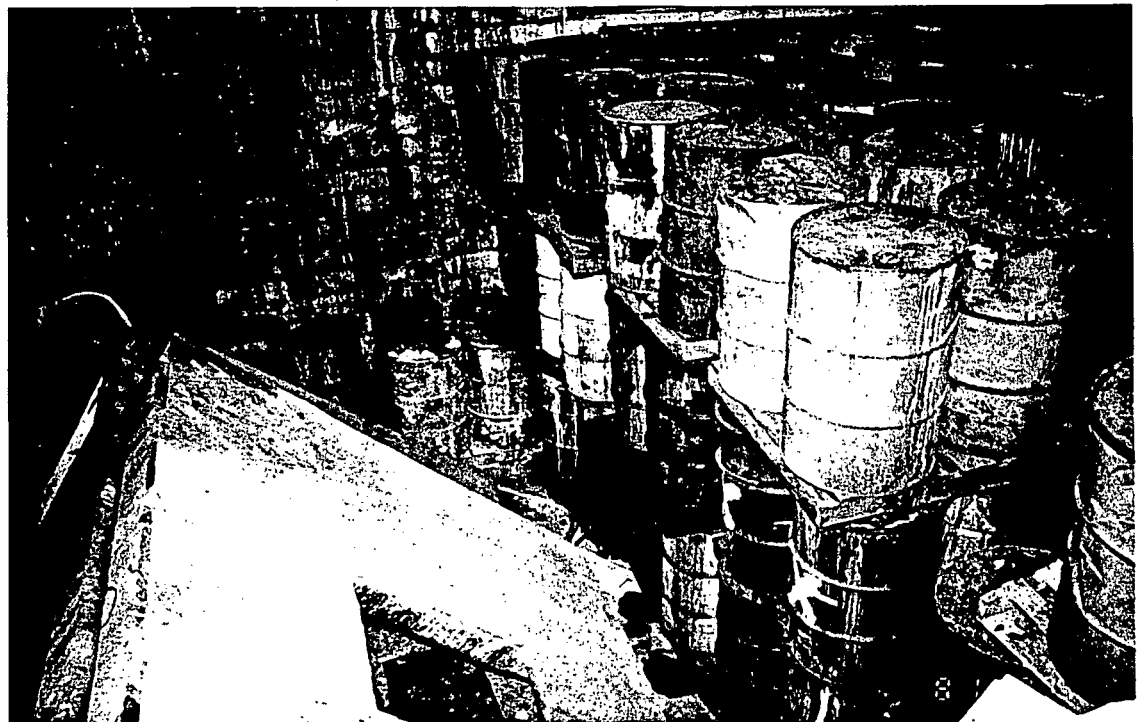


Date: August 11, 1997
 Subject: Drums stacked three high in
 southeast corner of large drum room.



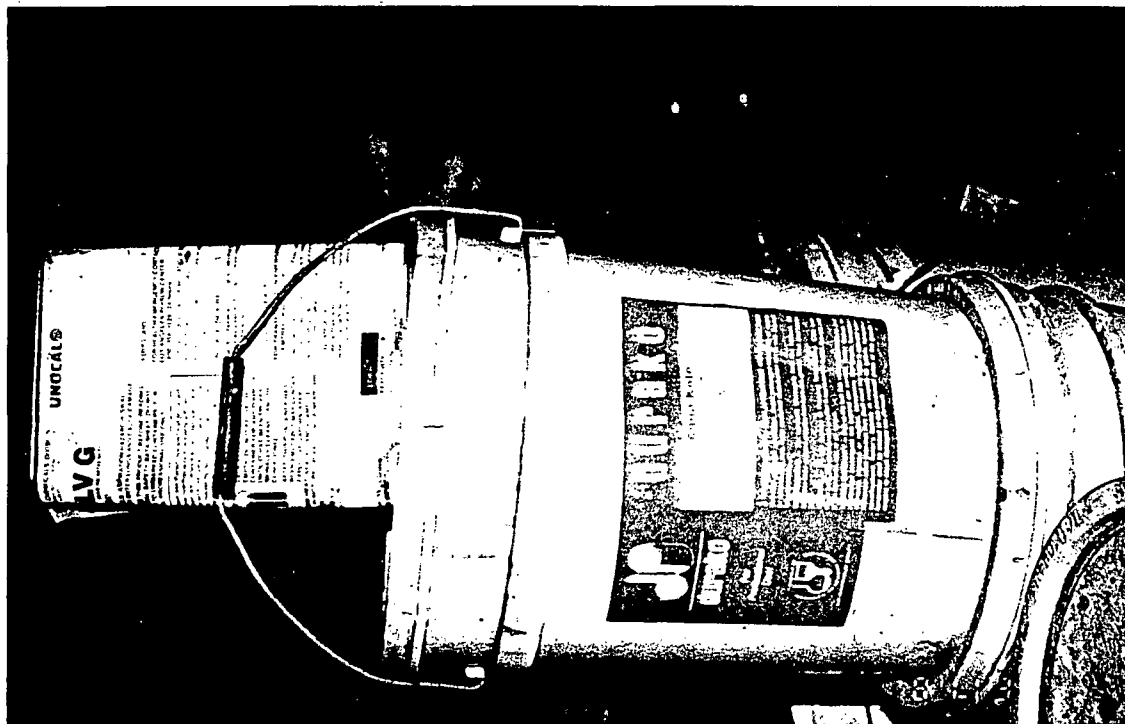
Site: Durako Paint
 Photo No: 21 (R2F14)
 Direction: East
 Camera: Minolta
 Photographer: M. Dieckhaus

Date: August 11, 1997
 Subject: Mixing tanks on platform in large drum room.



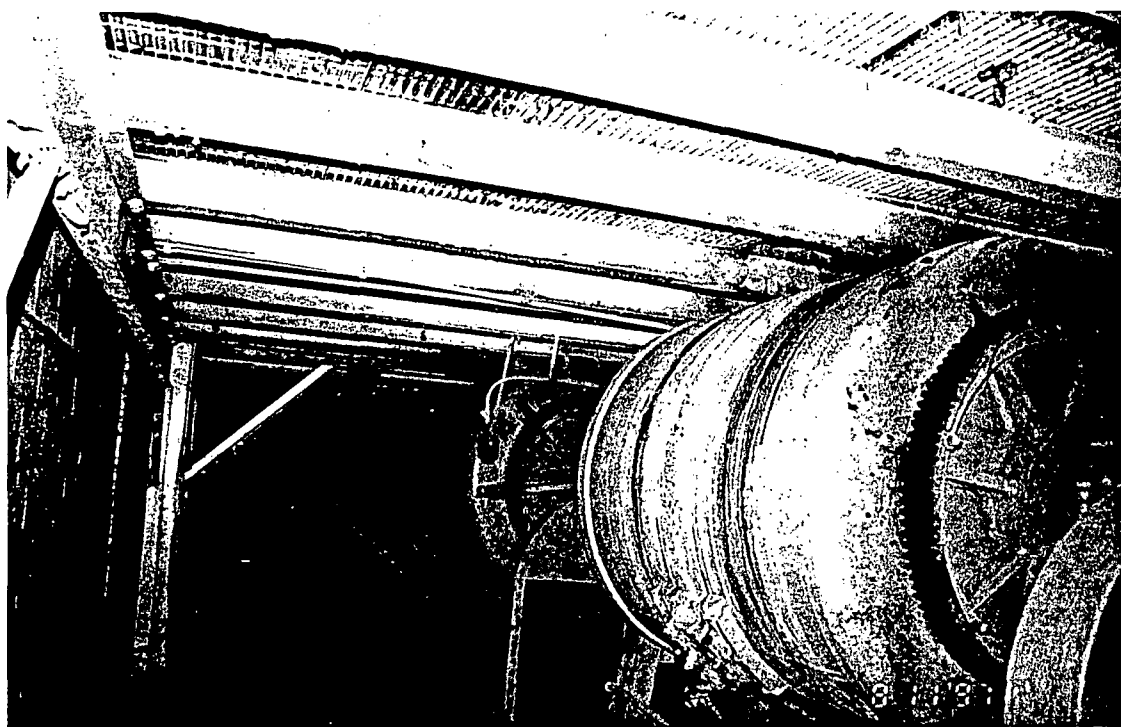
Site: Durako Paint
 Photo No: 22 (R2F15)
 Direction: East
 Camera: Minolta
 Photographer: M. Dieckhaus

Date: August 11, 1997
 Subject: Northeast corner of large drum room.



Site: Durako Paint
 Photo No: 25 (R2F18)
 Direction: N/A
 Camera: Minolta
 Photographer: M. Dieckhaus

Date: August 11, 1997
 Subject: "Durako" paint bucket stacked on
 platform of the large drum room.



Site: Durako Paint
 Photo No: 26 (R2F19)
 Direction: East
 Camera: Minolta
 Photographer: M. Dieckhaus

Date: August 11, 1997
 Subject: Mixing tanks located under
 platform of the large drum room.



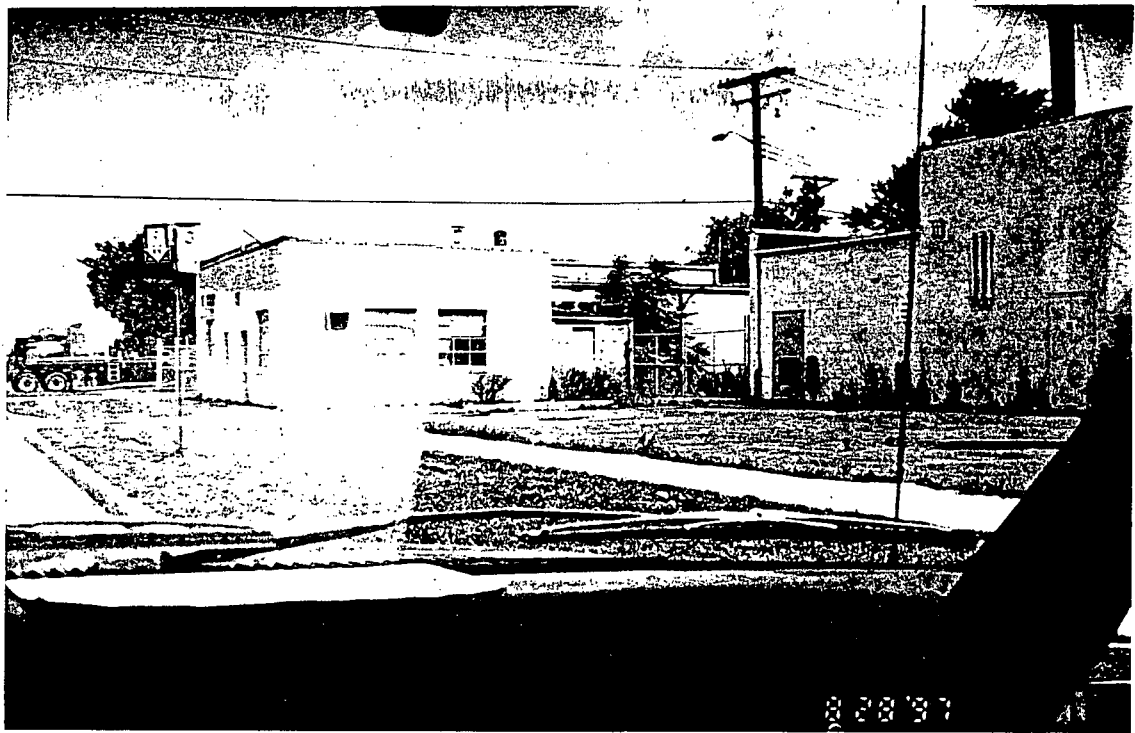
Site: Durako Paint
 Photo No: 29 (R2F23)
 Direction: Southwest
 Camera: Minolta
 Photographer: M. Dieckhaus

Date: August 11, 1997
 Subject: Drums stacked two high in office drum room.



Site: Durako Paint
 Photo No: 30 (R2F24)
 Direction: Northwest
 Camera: Minolta
 Photographer: M. Dieckhaus

Date: August 11, 1997
 Subject: Drums and containers stacked three high in large drum room.



Site: Durako Paint
 Photo No: 33 (R3F10)
 Direction: South
 Camera: Minolta
 Photographer: M. Dieckhaus

Date: August 28, 1997
 Subject: Building at 19128 Mt. Elliott Avenue, previously owned by Durako Paint.



Site: Durako Paint
 Photo No: 34 (R3F13)
 Direction: East
 Camera: Minolta
 Photographer: M. Dieckhaus

Date: August 28, 1997
 Subject: Margolis Surplus on Mt. Elliott Avenue. Building was previously owned by Durako Paint.



Site: Durako
 Photo No: 37 (R4F3)
 Direction: Northeast
 Camera: Minolta
 Photographer: M. Dieckhaus

Date: August 11, 1997
 Subject: Triple-stacked 55-gallon drums in the large drum room.



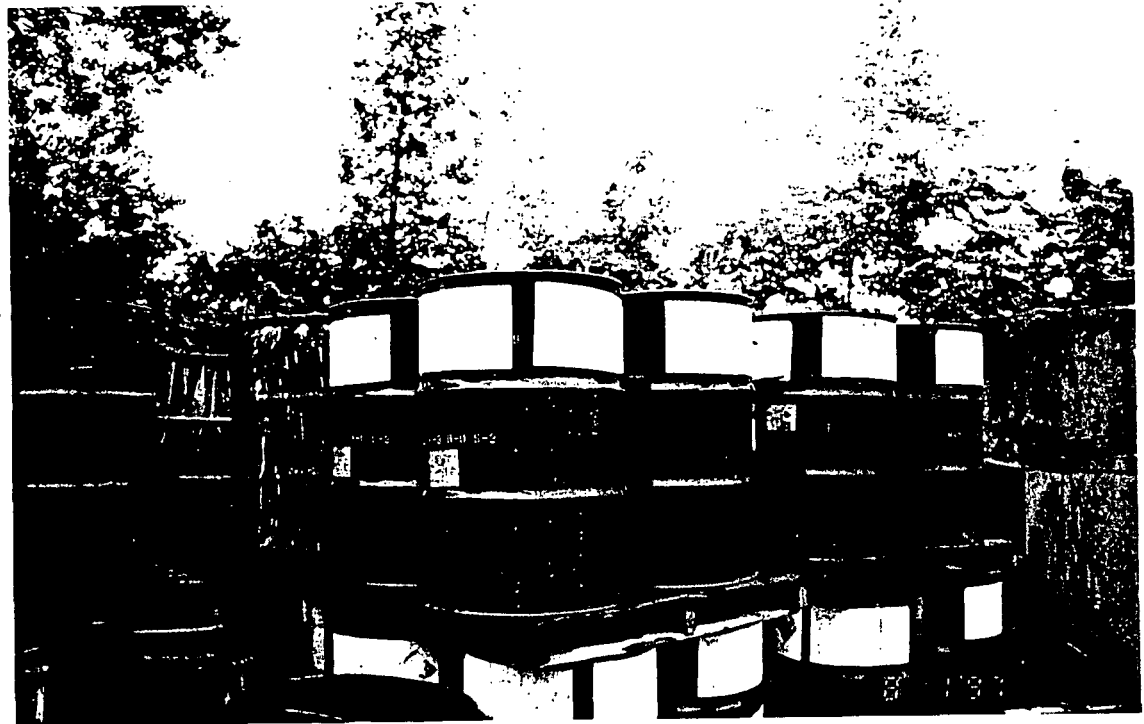
Site: Durako
 Photo No: 38 (R4F6)
 Direction: Northwest
 Camera: Minolta
 Photographer: M. Dieckhaus

Date: August 11, 1997
 Subject: Stacked 55-gallon drums and paint pigment containers in the large drum room.



Site: Durako
 Photo No: 41 (R4F9)
 Direction: East
 Camera: Minolta
 Photographer: M. Dieckhaus

Date: August 11, 1997
 Subject: Debris, various drums, and
 containers in the yard area.



Site: Durako
 Photo No: 42 (R4F10)
 Direction: Southeast
 Camera: Minolta
 Photographer: M. Dieckhaus

Date: August 11, 1997
 Subject: Double-stacked 55-gallons drums
 in the yard area.

Appendix B

Data Validation Memoranda



ecology and environment, inc.

International Specialists in the Environment

6777 Engle Road
Cleveland, Ohio 44130
Tel: (216) 243-3330. Fax: (216) 243-6923

MEMORANDUM

DATE: September 11, 1997

TO: Anne Hellie, START Project Manager, E & E, Taylor, Michigan

FROM: Brigid T. Brooks, START Chemical Engineer, E & E, Cleveland, Ohio

THROUGH: David Hendren, START Quality Assurance Officer, E & E, Chicago, Illinois

SUBJECT: Semivolatile Organic Compound (SVOC) Analytical Data Quality Assurance Review, Durako Paint, Detroit, Wayne County, Michigan.

REFERENCE: Project TDD: S05-9707-008 Analytical TDD: S05-9707-806
Project PAN: 7U0801SIXX Analytical PAN: 7UAF01TAXX

The data quality assurance (QA) review of seven samples, collected from the Durako Paint site, is complete. Samples were collected on August 11, 1997, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). Samples were submitted to Laidlaw Environmental, Inc. \ENCOTEC, Ann Arbor, Michigan, for analyses. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste-846 (SW-846) Method 8270 for the determination of VOCs.

Sample Identification

<u>START</u> <u>Identification No.</u>	<u>Laboratory</u> <u>Identification No.</u>
DPD1	200034462
DPD2	200034463
DPD4	200034465
DPD5	200034466
DPD6	200034467
DPT1	200034470
DPT2	200034471

Data Qualifications

I. Holding Time: Acceptable

Samples were collected on August 11, 1997, and received by the laboratory on August 13, 1997. Samples were extracted on August 19, 1997, and analyzed on August 23, 24, 25, and 26, 1997 for SVOCs. Analyses were completed within the 14 days holding time specified in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01.

II. Gas Chromatography/Mass Spectrometry (GC/MS) Tuning: Acceptable

Decafluorotriphenylphosphine (DFTPP) standards were analyzed within the required 12-hour time limit for all sample analyses on the same instrument used to analyze the samples, and the ion abundance criteria were met for each DFTPP standard.

III. Calibration:

A. Initial Calibration: Acceptable

All response factors (RFs) were greater than zero, and relative response factors (RRFs) for all parameters were at least 0.05 for the initial calibration. The percent relative standard deviations (%RSDs) were within the acceptable range of less than or equal to 30% for all detected SVOCs.

B. Continuing Calibration: Acceptable

All percent differences (%Ds) between the initial calibration and continuing calibration were within the recommended limits of less than or equal to 25% for all detected SVOCs.

IV. Internal Standards: Acceptable

All internal standard (IS) areas were within the specified limits (-50 to +100%) of the associated calibration standards, except perylene-d12 for sample DPD1. None of the sample results associated with the IS were positive; thus, no action was taken. IS retention times (RTs) were within the plus-or-minus 30-second control limit.

V. Method Blanks: Acceptable

A method blank was extracted with the samples and analyzed. All target analytes were below the instrument detection limits.

VI. Compound Identification: Acceptable

All relative retention times (RRTs) were within 0.06 units of the standard RRTs.

VII. Compound Quantitation and Reported Detection Limits: Acceptable

All reported values have been correctly adjusted to reflect all dilutions.

VIII. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on the criteria outlined in OSWER Directive 9360.4-01 (April 1990), Data Validation Procedures; Section 4.0, BNAs by GC/MS Analysis; and Section 2.7, Quality Assurance Requirements. Based upon the information provided, the data are acceptable for use as reported.

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPD-1

Date Sampled: 08/11/97
 Date Received: 08/13/97
 Date Extracted: 08/19/97
 Analysis Date: 08/26/97
 Second Analysis Date: N/A
 Method Reference: 8270
 Matrix: LIQUID, NON-AQUEOUS

ENCOTEC Project ID: 71060
 ENCOTEC SDG ID: EE-EPA-97H1
 ENCOTEC QC Set ID: BNAH2012S
 ENCOTEC Submission ID: 100005531
 ENCOTEC Sample ID: 200034462
 Percent Total Solids: N/A
 Calculation Basis: Wet Weight

	SEMIVOLATILE ORGANICS Target Compound List	CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flag
1	Acenaphthene	83-32-9	98000	10	U	
2	Acenaphthylene	208-96-8	98000	10	U	
3	Anthracene	120-12-7	98000	10	U	
4	Benzo (a) anthracene	56-55-3	98000	10	U	
5	Benzo (a) pyrene	50-32-8	98000	10	U	
6	Benzo (b) fluoranthene	205-99-2	98000	10	U	
7	Benzo (g, h, i) perylene	191-24-2	98000	10	U	
8	Benzo (k) fluoranthene	207-08-9	98000	10	U	
9	4-Bromophenyl phenyl ether	101-55-3	98000	10	U	
10	Butyl benzyl phthalate	85-68-7	98000	10	U	
11	Carbazole	86-74-8	98000	10	U	
12	4-Chloro-3-methylphenol	59-50-7	98000	10	U	
13	4-Chloroaniline	106-47-8	98000	10	U	
14	bis (2-Chloroethoxy) methane	111-91-1	98000	10	U	
15	bis (2-Chloroethyl) ether	111-44-4	98000	10	U	
16	bis (2-Chloroisopropyl) ether	108-60-1	98000	10	U	
17	2-Chloronaphthalene	91-58-7	98000	10	U	
18	2-Chlorophenol	95-57-8	98000	10	U	
19	4-Chlorophenyl phenyl ether	7005-72-3	98000	10	U	
20	Chrysene	218-01-9	98000	10	U	
21	Di-n-butyl phthalate	84-74-2	98000	10	U	
22	Di-n-octyl phthalate	117-84-0	98000	10	U	
23	Dibenz (a, h) anthracene	53-70-3	98000	10	U	
24	Dibenzofuran	132-64-9	98000	10	U	
25	1,4-Dichlorobenzene	106-46-7	98000	10	U	
26	1,3-Dichlorobenzene	541-73-1	98000	10	U	
27	1,2-Dichlorobenzene	95-50-1	98000	10	U	
28	3,3'-Dichlorobenzidine	91-94-1	98000	10	U	
29	2,4-Dichlorophenol	120-83-2	98000	10	U	
30	Diethyl phthalate	84-66-2	98000	10	U	
31	Dimethyl phthalate	131-11-3	98000	10	U	
32	2,4-Dimethylphenol	105-67-9	98000	10	U	
33	4,6-Dinitro-2-methylphenol	534-52-1	250000	10	U	
34	2,4-Dinitrophenol	51-28-5	250000	10	U	

Laidlaw Environmental, Inc. / ENCOTEC
 3985 Research Park Drive ■ Ann Arbor, MI 48108
 Telephone: (313) 761-1389 - Telefax: (313) 761-1034

Report Date: 08/25

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPD-1

Date Sampled:	08/11/97	ENCOTEC Project ID:	71060
Date Received:	08/13/97	ENCOTEC SDG ID:	EE-EPA-97H1
Date Extracted:	08/19/97	ENCOTEC QC Set ID:	BNAH2012S
Analysis Date:	08/26/97	ENCOTEC Submission ID:	100005531
Second Analysis Date:	N/A	ENCOTEC Sample ID:	200034462
Method Reference:	8270	Percent Total Solids:	N/A
Matrix:	LIQUID, NON-AQUEOUS	Calculation Basis:	Wet Weight

	SEMIVOLATILE ORGANICS Target Compound List	CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flag
35	2,6-Dinitrotoluene	606-20-2	98000	10	U	
36	2,4-Dinitrotoluene	121-14-2	98000	10	U	
37	bis(2-Ethylhexyl) phthalate	117-81-7	98000	10	U	
38	Fluoranthene	206-44-0	98000	10	U	
39	Fluorene	86-73-7	98000	10	U	
40	Hexachlorobenzene	118-74-1	98000	10	U	
41	Hexachlorobutadiene	87-68-3	98000	10	U	
42	Hexachlorocyclopentadiene	77-47-4	98000	10	U	
43	Hexachloroethane	67-72-1	98000	10	U	
44	Indeno(1,2,3-c,d)pyrene	193-39-5	98000	10	U	
45	Isophorone	78-59-1	98000	10	U	
46	2-Methylnaphthalene	91-57-6	98000	10	U	
47	4-Methylphenol	106-44-5	98000	10	U	
48	2-Methylphenol	95-48-7	98000	10	U	
49	N-Nitroso-di-n-propylamine	621-64-7	98000	10	U	
50	N-Nitrosodiphenylamine	86-30-6	98000	10	U	
51	Naphthalene	91-20-3	98000	10	140000	
52	4-Nitroaniline	100-01-6	250000	10	U	
53	3-Nitroaniline	99-09-2	250000	10	U	
54	2-Nitroaniline	88-74-4	250000	10	U	
55	Nitrobenzene	98-95-3	98000	10	U	
56	4-Nitrophenol	100-02-7	250000	10	U	
57	2-Nitrophenol	88-75-5	98000	10	U	
58	Pentachlorophenol	87-86-5	250000	10	U	
59	Phenanthrene	85-01-8	98000	10	U	
60	Phenol	108-95-2	98000	10	U	
61	Pyrene	129-00-0	98000	10	U	
62	1,2,4-Trichlorobenzene	120-82-1	98000	10	U	
63	2,4,6-Trichlorophenol	88-06-2	98000	10	U	
64	2,4,5-Trichlorophenol	95-95-4	250000	10	U	

Laidlaw Environmental, Inc. / ENCOTEC
 3985 Research Park Drive ■ Ann Arbor, MI 48108
 Telephone: (313) 761-1389 - Telefax: (313) 761-1034

Report Date: 08/28

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPD-2

Date Sampled:	08/11/97	ENCOTEC Project ID:	71060
Date Received:	08/13/97	ENCOTEC SDG ID:	EE-EPA-97H1
Date Extracted:	08/19/97	ENCOTEC QC Set ID:	BNAH2012S
Analysis Date:	08/26/97	ENCOTEC Submission ID:	100005531
Second Analysis Date:	N/A	ENCOTEC Sample ID:	200034463
Method Reference:	8270	Percent Total Solids:	N/A
Matrix:	LIQUID, NON-AQUEOUS	Calculation Basis:	Wet Weight

	SEMIVOLATILE ORGANICS Target Compound List	CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flag
1	Acenaphthene	83-32-9	190000	10	U	
2	Acenaphthylene	208-96-8	190000	10	U	
3	Anthracene	120-12-7	190000	10	U	
4	Benzo (a) anthracene	56-55-3	190000	10	U	
5	Benzo (a) pyrene	50-32-8	190000	10	U	
6	Benzo (b) fluoranthene	205-99-2	190000	10	U	
7	Benzo (g, h, i) perylene	191-24-2	190000	10	U	
8	Benzo (k) fluoranthene	207-08-9	190000	10	U	
9	4-Bromophenyl phenyl ether	101-55-3	190000	10	U	
10	Butyl benzyl phthalate	85-68-7	190000	10	U	
11	Carbazole	86-74-8	190000	10	U	
12	4-Chloro-3-methylphenol	59-50-7	190000	10	U	
13	4-Chloroaniline	106-47-8	190000	10	U	
14	bis (2-Chloroethoxy) methane	111-91-1	190000	10	U	
15	bis (2-Chloroethyl) ether	111-44-4	190000	10	U	
16	bis (2-Chloroisopropyl) ether	108-60-1	190000	10	U	
17	2-Chloronaphthalene	91-58-7	190000	10	U	
18	2-Chlorophenol	95-57-8	190000	10	U	
19	4-Chlorophenyl phenyl ether	7005-72-3	190000	10	U	
20	Chrysene	218-01-9	190000	10	U	
21	Di-n-butyl phthalate	84-74-2	190000	10	U	
22	Di-n-octyl phthalate	117-84-0	190000	10	U	
23	Dibenz (a, h) anthracene	53-70-3	190000	10	U	
24	Dibenzofuran	132-64-9	190000	10	U	
25	1,4-Dichlorobenzene	106-46-7	190000	10	U	
26	1,3-Dichlorobenzene	541-73-1	190000	10	U	
27	1,2-Dichlorobenzene	95-50-1	190000	10	U	
28	3,3'-Dichlorobenzidine	91-94-1	190000	10	U	
29	2,4-Dichlorophenol	120-83-2	190000	10	U	
30	Diethyl phthalate	84-66-2	190000	10	U	
31	Dimethyl phthalate	131-11-3	190000	10	U	
32	2,4-Dimethylphenol	105-67-9	190000	10	430000	
33	4,6-Dinitro-2-methylphenol	534-52-1	490000	10	U	
34	2,4-Dinitrophenol	51-28-5	490000	10	U	

Laidlaw Environmental, Inc. / ENCOTEC

3985 Research Park Drive ■ Ann Arbor, MI 48108

Telephone: (313) 761-1389 - Telefax: (313) 761-1034

Report Date: 08/28/97

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPD-2

Date Sampled:	08/11/97	ENCOTEC Project ID:	71060
Date Received:	08/13/97	ENCOTEC SDG ID:	EE-EPA-97H1
Date Extracted:	08/19/97	ENCOTEC QC Set ID:	BNAH2012S
Analysis Date:	08/26/97	ENCOTEC Submission ID:	100005531
Second Analysis Date:	N/A	ENCOTEC Sample ID:	200034463
Method Reference:	8270	Percent Total Solids:	N/A
Matrix:	LIQUID, NON-AQUEOUS	Calculation Basis:	Wet Weight

	SEMIVOLATILE ORGANICS Target Compound List	CAS #	Quant Limit (ug/Kg)	Dil	Conc. (ug/Kg)	Flag
35	2,6-Dinitrotoluene	606-20-2	190000	10	U	
36	2,4-Dinitrotoluene	121-14-2	190000	10	U	
37	bis(2-Ethylhexyl) phthalate	117-81-7	190000	10	U	
38	Fluoranthene	206-44-0	190000	10	U	
39	Fluorene	86-73-7	190000	10	U	
40	Hexachlorobenzene	118-74-1	190000	10	U	
41	Hexachlorobutadiene	87-68-3	190000	10	U	
42	Hexachlorocyclopentadiene	77-47-4	190000	10	U	
43	Hexachloroethane	67-72-1	190000	10	U	
44	Indeno(1,2,3-c,d)pyrene	193-39-5	190000	10	U	
45	Isophorone	78-59-1	190000	10	U	
46	2-Methylnaphthalene	91-57-6	190000	10	U	
47	4-Methylphenol	106-44-5	190000	10	U	
48	2-Methylphenol	95-48-7	190000	10	U	
49	N-Nitroso-di-n-propylamine	621-64-7	190000	10	U	
50	N-Nitrosodiphenylamine	86-30-6	190000	10	U	
51	Naphthalene	91-20-3	190000	10	U	
52	4-Nitroaniline	100-01-6	490000	10	U	
53	3-Nitroaniline	99-09-2	490000	10	U	
54	2-Nitroaniline	88-74-4	490000	10	U	
55	Nitrobenzene	98-95-3	190000	10	U	
56	4-Nitrophenol	100-02-7	490000	10	U	
57	2-Nitrophenol	88-75-5	190000	10	U	
58	Pentachlorophenol	87-86-5	490000	10	U	
59	Phenanthrene	85-01-8	190000	10	U	
60	Phenol	108-95-2	190000	10	U	
61	Pyrene	129-00-0	190000	10	U	
62	1,2,4-Trichlorobenzene	120-82-1	190000	10	U	
63	2,4,6-Trichlorophenol	88-06-2	190000	10	U	
64	2,4,5-Trichlorophenol	95-95-4	490000	10	U	

Laidlaw Environmental, Inc. / ENCOTEC
 3985 Research Park Drive ■ Ann Arbor, MI 48108
 Telephone: (313) 761-1389 - Telefax: (313) 761-1034

Report Date: 08/28/97

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPD-4

Date Sampled:	08/11/97	ENCOTEC Project ID:	71060
Date Received:	08/13/97	ENCOTEC SDG ID:	EE-EPA-97H1
Date Extracted:	08/19/97	ENCOTEC QC Set ID:	BNAH2012S
Analysis Date:	08/25/97	ENCOTEC Submission ID:	100005531
Second Analysis Date:	N/A	ENCOTEC Sample ID:	200034465
Method Reference:	8270	Percent Total Solids:	N/A
Matrix:	LIQUID, NON-AQUEOUS	Calculation Basis:	Wet Weight

	SEMIVOLATILE ORGANICS Target Compound List	CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flag
1	Acenaphthene	83-32-9	98000	10	U	M
2	Acenaphthylene	208-96-8	98000	10	U	M
3	Anthracene	120-12-7	98000	10	U	M
4	Benzo(a)anthracene	56-55-3	98000	10	U	M
5	Benzo(a)pyrene	50-32-8	98000	10	U	M
6	Benzo(b)fluoranthene	205-99-2	98000	10	U	M
7	Benzo(g,h,i)perylene	191-24-2	98000	10	U	M
8	Benzo(k)fluoranthene	207-08-9	98000	10	U	M
9	4-Bromophenyl phenyl ether	101-55-3	98000	10	U	M
10	Butyl benzyl phthalate	85-68-7	98000	10	U	M
11	Carbazole	86-74-8	98000	10	U	M
12	4-Chloro-3-methylphenol	59-50-7	98000	10	U	M
13	4-Chloroaniline	106-47-8	98000	10	U	M
14	bis(2-Chloroethoxy)methane	111-91-1	98000	10	U	M
15	bis(2-Chloroethyl) ether	111-44-4	98000	10	U	M
16	bis(2-Chloroisopropyl) ether	108-60-1	98000	10	U	M
17	2-Chloronaphthalene	91-58-7	98000	10	U	M
18	2-Chlorophenol	95-57-8	98000	10	U	M
19	4-Chlorophenyl phenyl ether	7005-72-3	98000	10	U	M
20	Chrysene	218-01-9	98000	10	U	M
21	Di-n-butyl phthalate	84-74-2	98000	10	U	M
22	Di-n-octyl phthalate	117-84-0	98000	10	U	M
23	Dibenz(a,h)anthracene	53-70-3	98000	10	U	M
24	Dibenzofuran	132-64-9	98000	10	U	M
25	1,4-Dichlorobenzene	106-46-7	98000	10	U	M
26	1,3-Dichlorobenzene	541-73-1	98000	10	U	M
27	1,2-Dichlorobenzene	95-50-1	98000	10	U	M
28	3,3'-Dichlorobenzidine	91-94-1	98000	10	U	M
29	2,4-Dichlorophenol	120-83-2	98000	10	U	M
30	Diethyl phthalate	84-66-2	98000	10	U	M
31	Dimethyl phthalate	131-11-3	98000	10	U	M
32	2,4-Dimethylphenol	105-67-9	98000	10	U	M
33	4,6-Dinitro-2-methylphenol	534-52-1	250000	10	U	M
34	2,4-Dinitrophenol	51-28-5	250000	10	U	M

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Report Date: 08/26/97

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA
Sample ID: DPD-4

Date Sampled:	08/11/97	ENCOTEC Project ID:	71060
Date Received:	08/13/97	ENCOTEC SDG ID:	EE-EPA-97H1
Date Extracted:	08/19/97	ENCOTEC QC Set ID:	BNAH2012S
Analysis Date:	08/25/97	ENCOTEC Submission ID:	100005531
Second Analysis Date:	N/A	ENCOTEC Sample ID:	200034465
Method Reference:	8270	Percent Total Solids:	N/A
Matrix:	LIQUID, NON-AQUEOUS	Calculation Basis:	Wet Weight

	SEMIVOLATILE ORGANICS Target Compound List	CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flag
35	2,6-Dinitrotoluene	606-20-2	98000	10	U	M
36	2,4-Dinitrotoluene	121-14-2	98000	10	U	M
37	bis(2-Ethylhexyl) phthalate	117-81-7	98000	10	U	M
38	Fluoranthene	206-44-0	98000	10	U	M
39	Fluorene	86-73-7	98000	10	U	M
40	Hexachlorobenzene	118-74-1	98000	10	U	M
41	Hexachlorobutadiene	87-68-3	98000	10	U	M
42	Hexachlorocyclopentadiene	77-47-4	98000	10	U	M
43	Hexachloroethane	67-72-1	98000	10	U	M
44	Indeno (1,2,3-c,d) pyrene	193-39-5	98000	10	U	M
45	Isophorone	78-59-1	98000	10	U	M
46	2-Methylnaphthalene	91-57-6	98000	10	U	M
47	4-Methylphenol	106-44-5	98000	10	U	M
48	2-Methylphenol	95-48-7	98000	10	U	M
49	N-Nitroso-di-n-propylamine	621-64-7	98000	10	U	M
50	N-Nitrosodiphenylamine	86-30-6	98000	10	U	M
51	Naphthalene	91-20-3	98000	10	U	M
52	4-Nitroaniline	100-01-6	250000	10	U	M
53	3-Nitroaniline	99-09-2	250000	10	U	M
54	2-Nitroaniline	88-74-4	250000	10	U	M
55	Nitrobenzene	98-95-3	98000	10	U	M
56	4-Nitrophenol	100-02-7	250000	10	U	M
57	2-Nitrophenol	88-75-5	98000	10	U	M
58	Pentachlorophenol	87-86-5	250000	10	U	M
59	Phenanthrene	85-01-8	98000	10	U	M
60	Phenol	108-95-2	98000	10	U	M
61	Pyrene	129-00-0	98000	10	U	M
62	1,2,4-Trichlorobenzene	120-82-1	98000	10	U	M
63	2,4,6-Trichlorophenol	88-06-2	98000	10	U	M
64	2,4,5-Trichlorophenol	95-95-4	250000	10	U	M

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3985 Research Park Drive ■ Ann Arbor, MI 48108
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Report Date: 08/26/97

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPD-5

Date Sampled: 08/11/97
 Date Received: 08/13/97
 Date Extracted: 08/19/97
 Analysis Date: 08/24/97
 Second Analysis Date: N/A
 Method Reference: 8270
 Matrix: LIQUID, NON-AQUEOUS

ENCOTEC Project ID: 71060
 ENCOTEC SDG ID: EE-EPA-97H1
 ENCOTEC QC Set ID: BNAH2012S
 ENCOTEC Submission ID: 100005531
 ENCOTEC Sample ID: 200034466
 Percent Total Solids: N/A
 Calculation Basis: Wet Weight

	SEMIVOLATILE ORGANICS Target Compound List	CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flag
1	Acenaphthene	83-32-9	98000	10	U	
2	Acenaphthylene	208-96-8	98000	10	U	
3	Anthracene	120-12-7	98000	10	U	
4	Benzo (a) anthracene	56-55-3	98000	10	U	
5	Benzo (a) pyrene	50-32-8	98000	10	U	
6	Benzo (b) fluoranthene	205-99-2	98000	10	U	
7	Benzo (g, h, i) perylene	191-24-2	98000	10	U	
8	Benzo (k) fluoranthene	207-08-9	98000	10	U	
9	4-Bromophenyl phenyl ether	101-55-3	98000	10	U	
10	Butyl benzyl phthalate	85-68-7	98000	10	U	
11	Carbazole	86-74-8	98000	10	U	
12	4-Chloro-3-methylphenol	59-50-7	98000	10	U	
13	4-Chloroaniline	106-47-8	98000	10	U	
14	bis (2-Chloroethoxy) methane	111-91-1	98000	10	U	
15	bis (2-Chloroethyl) ether	111-44-4	98000	10	U	
16	bis (2-Chloroisopropyl) ether	108-60-1	98000	10	U	
17	2-Chloronaphthalene	91-58-7	98000	10	U	
18	2-Chlorophenol	95-57-8	98000	10	U	
19	4-Chlorophenyl phenyl ether	7005-72-3	98000	10	U	
20	Chrysene	218-01-9	98000	10	U	
21	Di-n-butyl phthalate	84-74-2	98000	10	U	
22	Di-n-octyl phthalate	117-84-0	98000	10	U	
23	Dibenz (a, h) anthracene	53-70-3	98000	10	U	
24	Dibenzofuran	132-64-9	98000	10	U	
25	1,4-Dichlorobenzene	106-46-7	98000	10	U	
26	1,3-Dichlorobenzene	541-73-1	98000	10	U	
27	1,2-Dichlorobenzene	95-50-1	98000	10	U	
28	3,3'-Dichlorobenzidine	91-94-1	98000	10	U	
29	2,4-Dichlorophenol	120-83-2	98000	10	U	
30	Diethyl phthalate	84-66-2	98000	10	U	
31	Dimethyl phthalate	131-11-3	98000	10	U	
32	2,4-Dimethylphenol	105-67-9	98000	10	120000	
33	4,6-Dinitro-2-methylphenol	534-52-1	250000	10	U	
34	2,4-Dinitrophenol	51-28-5	250000	10	U	

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Report Date: 08/26/97

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPD-5

Date Sampled:	08/11/97	ENCOTEC Project ID:	71060
Date Received:	08/13/97	ENCOTEC SDG ID:	EE-EPA-97H1
Date Extracted:	08/19/97	ENCOTEC QC Set ID:	BNAH2012S
Analysis Date:	08/24/97	ENCOTEC Submission ID:	100005531
Second Analysis Date:	N/A	ENCOTEC Sample ID:	200034466
Method Reference:	8270	Percent Total Solids:	N/A
Matrix:	LIQUID, NON-AQUEOUS	Calculation Basis:	Wet Weight

	SEMIVOLATILE ORGANICS Target Compound List	CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flag
35	2,6-Dinitrotoluene	606-20-2	98000	10	U	
36	2,4-Dinitrotoluene	121-14-2	98000	10	U	
37	bis(2-Ethylhexyl) phthalate	117-81-7	98000	10	U	
38	Fluoranthene	206-44-0	98000	10	U	
39	Fluorene	86-73-7	98000	10	U	
40	Hexachlorobenzene	118-74-1	98000	10	U	
41	Hexachlorobutadiene	87-68-3	98000	10	U	
42	Hexachlorocyclopentadiene	77-47-4	98000	10	U	
43	Hexachloroethane	67-72-1	98000	10	U	
44	Indeno(1,2,3-c,d)pyrene	193-39-5	98000	10	U	
45	Isophorone	78-59-1	98000	10	U	
46	2-Methylnaphthalene	91-57-6	98000	10	U	
47	4-Methylphenol	106-44-5	98000	10	U	
48	2-Methylphenol	95-48-7	98000	10	U	
49	N-Nitroso-di-n-propylamine	621-64-7	98000	10	U	
50	N-Nitrosodiphenylamine	86-30-6	98000	10	U	
51	Naphthalene	91-20-3	98000	10	380000	
52	4-Nitroaniline	100-01-6	250000	10	U	
53	3-Nitroaniline	99-09-2	250000	10	U	
54	2-Nitroaniline	88-74-4	250000	10	U	
55	Nitrobenzene	98-95-3	98000	10	U	
56	4-Nitrophenol	100-02-7	250000	10	U	
57	2-Nitrophenol	88-75-5	98000	10	U	
58	Pentachlorophenol	87-86-5	250000	10	U	
59	Phenanthrene	85-01-8	98000	10	U	
60	Phenol	108-95-2	98000	10	U	
61	Pyrene	129-00-0	98000	10	U	
62	1,2,4-Trichlorobenzene	120-82-1	98000	10	U	
63	2,4,6-Trichlorophenol	88-06-2	98000	10	U	
64	2,4,5-Trichlorophenol	95-95-4	250000	10	U	

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Report Date: 08/26/97

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPD-6

Date Sampled: 08/11/97
 Date Received: 08/13/97
 Date Extracted: 08/19/97
 Analysis Date: 08/25/97
 Second Analysis Date: N/A
 Method Reference: 8270
 Matrix: LIQUID, NON-AQUEOUS

ENCOTEC Project ID: 71060
 ENCOTEC SDG ID: EE-EPA-97H1
 ENCOTEC QC Set ID: BNAH2012S
 ENCOTEC Submission ID: 100005531
 ENCOTEC Sample ID: 200034467
 Percent Total Solids: N/A
 Calculation Basis: Wet Weight

	SEMIVOLATILE ORGANICS Target Compound List	CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flag
1	Acenaphthene	83-32-9	400000	20	U	M
2	Acenaphthylene	208-96-8	400000	20	U	M
3	Anthracene	120-12-7	400000	20	U	M
4	Benzo(a)anthracene	56-55-3	400000	20	U	M
5	Benzo(a)pyrene	50-32-8	400000	20	U	M
6	Benzo(b)fluoranthene	205-99-2	400000	20	U	M
7	Benzo(g,h,i)perylene	191-24-2	400000	20	U	M
8	Benzo(k)fluoranthene	207-08-9	400000	20	U	M
9	4-Bromophenyl phenyl ether	101-55-3	400000	20	U	M
10	Butyl benzyl phthalate	85-68-7	400000	20	U	M
11	Carbazole	86-74-8	400000	20	U	M
12	4-Chloro-3-methylphenol	59-50-7	400000	20	U	M
13	4-Chloroaniline	106-47-8	400000	20	U	M
14	bis(2-Chloroethoxy)methane	111-91-1	400000	20	U	M
15	bis(2-Chloroethyl) ether	111-44-4	400000	20	U	M
16	bis(2-Chloroisopropyl) ether	108-60-1	400000	20	U	M
17	2-Chloronaphthalene	91-58-7	400000	20	U	M
18	2-Chlorophenol	95-57-8	400000	20	U	M
19	4-Chlorophenyl phenyl ether	7005-72-3	400000	20	U	M
20	Chrysene	218-01-9	400000	20	U	M
21	Di-n-butyl phthalate	84-74-2	400000	20	U	M
22	Di-n-octyl phthalate	117-84-0	400000	20	U	M
23	Dibenz(a,h)anthracene	53-70-3	400000	20	U	M
24	Dibenzofuran	132-64-9	400000	20	U	M
25	1,4-Dichlorobenzene	106-46-7	400000	20	U	M
26	1,3-Dichlorobenzene	541-73-1	400000	20	U	M
27	1,2-Dichlorobenzene	95-50-1	400000	20	U	M
28	3,3'-Dichlorobenzidine	91-94-1	400000	20	U	M
29	2,4-Dichlorophenol	120-83-2	400000	20	U	M
30	Diethyl phthalate	84-66-2	400000	20	U	M
31	Dimethyl phthalate	131-11-3	400000	20	U	M
32	2,4-Dimethylphenol	105-67-9	400000	20	U	M
33	4,6-Dinitro-2-methylphenol	534-52-1	1000000	20	U	M
34	2,4-Dinitrophenol	51-28-5	1000000	20	U	M

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Report Date: 08/26/97

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPD-6

Date Sampled: 08/11/97
 Date Received: 08/13/97
 Date Extracted: 08/19/97
 Analysis Date: 08/25/97
 Second Analysis Date: N/A
 Method Reference: 8270
 Matrix: LIQUID, NON-AQUEOUS

ENCOTEC Project ID: 71060
 ENCOTEC SDG ID: EE-EPA-97H1
 ENCOTEC QC Set ID: BNAH2012S
 ENCOTEC Submission ID: 100005531
 ENCOTEC Sample ID: 200034467
 Percent Total Solids: N/A
 Calculation Basis: Wet Weight

	SEMIVOLATILE ORGANICS Target Compound List	CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flag
35	2,6-Dinitrotoluene	606-20-2	400000	20	U	M
36	2,4-Dinitrotoluene	121-14-2	400000	20	U	M
37	bis(2-Ethylhexyl) phthalate	117-81-7	400000	20	U	M
38	Fluoranthene	206-44-0	400000	20	U	M
39	Fluorene	86-73-7	400000	20	U	M
40	Hexachlorobenzene	118-74-1	400000	20	U	M
41	Hexachlorobutadiene	87-68-3	400000	20	U	M
42	Hexachlorocyclopentadiene	77-47-4	400000	20	U	M
43	Hexachloroethane	67-72-1	400000	20	U	M
44	Indeno(1,2,3-c,d)pyrene	193-39-5	400000	20	U	M
45	Isophorone	78-59-1	400000	20	U	M
46	2-Methylnaphthalene	91-57-6	400000	20	U	M
47	4-Methylphenol	106-44-5	400000	20	U	M
48	2-Methylphenol	95-48-7	400000	20	U	M
49	N-Nitroso-di-n-propylamine	621-64-7	400000	20	U	M
50	N-Nitrosodiphenylamine	86-30-6	400000	20	U	M
51	Naphthalene	91-20-3	400000	20	U	M
52	4-Nitroaniline	100-01-6	1000000	20	U	M
53	3-Nitroaniline	99-09-2	1000000	20	U	M
54	2-Nitroaniline	88-74-4	1000000	20	U	M
55	Nitrobenzene	98-95-3	400000	20	U	M
56	4-Nitrophenol	100-02-7	1000000	20	U	M
57	2-Nitrophenol	88-75-5	400000	20	U	M
58	Pentachlorophenol	87-86-5	1000000	20	U	M
59	Phenanthrene	85-01-8	400000	20	U	M
60	Phenol	108-95-2	400000	20	U	M
61	Pyrene	129-00-0	400000	20	U	M
62	1,2,4-Trichlorobenzene	120-82-1	400000	20	U	M
63	2,4,6-Trichlorophenol	88-06-2	400000	20	U	M
64	2,4,5-Trichlorophenol	95-95-4	1000000	20	U	M

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA
Sample ID: DPT-1

Date Sampled: 08/11/97
Date Received: 08/13/97
Date Extracted: 08/19/97
Analysis Date: 08/26/97
Second Analysis Date: N/A
Method Reference: 8270
Matrix: LIQUID, NON-AQUEOUS

ENCOTEC Project ID: 71060
ENCOTEC SDG ID: EE-EPA-97H1
ENCOTEC QC Set ID: BNAH2012S
ENCOTEC Submission ID: 100005531
ENCOTEC Sample ID: 200034470
Percent Total Solids: N/A
Calculation Basis: Wet Weight

	SEMIVOLATILE ORGANICS Target Compound List	CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flag
1	Acenaphthene	83-32-9	100000	5.0	U	M
2	Acenaphthylene	208-96-8	100000	5.0	U	M
3	Anthracene	120-12-7	100000	5.0	U	M
4	Benzo(a)anthracene	56-55-3	100000	5.0	U	M
5	Benzo(a)pyrene	50-32-8	100000	5.0	U	M
6	Benzo(b)fluoranthene	205-99-2	100000	5.0	U	M
7	Benzo(g,h,i)perylene	191-24-2	100000	5.0	U	M
8	Benzo(k)fluoranthene	207-08-9	100000	5.0	U	M
9	4-Bromophenyl phenyl ether	101-55-3	100000	5.0	U	M
10	Butyl benzyl phthalate	85-68-7	100000	5.0	U	M
11	Carbazole	86-74-8	100000	5.0	U	M
12	4-Chloro-3-methylphenol	59-50-7	100000	5.0	U	M
13	4-Chloroaniline	106-47-8	100000	5.0	U	M
14	bis(2-Chloroethoxy)methane	111-91-1	100000	5.0	U	M
15	bis(2-Chloroethyl) ether	111-44-4	100000	5.0	U	M
16	bis(2-Chloroisopropyl) ether	108-60-1	100000	5.0	U	M
17	2-Chloronaphthalene	91-58-7	100000	5.0	U	M
18	2-Chlorophenol	95-57-8	100000	5.0	U	M
19	4-Chlorophenyl phenyl ether	7005-72-3	100000	5.0	U	M
20	Chrysene	218-01-9	100000	5.0	U	M
21	Di-n-butyl phthalate	84-74-2	100000	5.0	U	M
22	Di-n-octyl phthalate	117-84-0	100000	5.0	U	M
23	Dibenz(a,h)anthracene	53-70-3	100000	5.0	U	M
24	Dibenzofuran	132-64-9	100000	5.0	U	M
25	1,4-Dichlorobenzene	106-46-7	100000	5.0	U	M
26	1,3-Dichlorobenzene	541-73-1	100000	5.0	U	M
27	1,2-Dichlorobenzene	95-50-1	100000	5.0	U	M
28	3,3'-Dichlorobenzidine	91-94-1	100000	5.0	U	M
29	2,4-Dichlorophenol	120-83-2	100000	5.0	U	M
30	Diethyl phthalate	84-66-2	100000	5.0	U	M
31	Dimethyl phthalate	131-11-3	100000	5.0	U	M
32	2,4-Dimethylphenol	105-67-9	100000	5.0	U	M
33	4,6-Dinitro-2-methylphenol	534-52-1	250000	5.0	U	M
34	2,4-Dinitrophenol	51-28-5	250000	5.0	U	M

Laidlaw Environmental, Inc. / ENCOTEC
3985 Research Park Drive ■ Ann Arbor, MI 48108
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Report Date: 08/28/97

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPT-1

Date Sampled:	08/11/97	ENCOTEC Project ID:	71060
Date Received:	08/13/97	ENCOTEC SDG ID:	EE-EPA-97H1
Date Extracted:	08/19/97	ENCOTEC QC Set ID:	BNAH2012S
Analysis Date:	08/26/97	ENCOTEC Submission ID:	100005531
Second Analysis Date:	N/A	ENCOTEC Sample ID:	200034470
Method Reference:	8270	Percent Total Solids:	N/A
Matrix:	LIQUID, NON-AQUEOUS	Calculation Basis:	Wet Weight

	SEMIVOLATILE ORGANICS Target Compound List	CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flag
35	2,6-Dinitrotoluene	606-20-2	100000	5.0	U	M
36	2,4-Dinitrotoluene	121-14-2	100000	5.0	U	M
37	bis(2-Ethylhexyl) phthalate	117-81-7	100000	5.0	U	M
38	Fluoranthene	206-44-0	100000	5.0	U	M
39	Fluorene	86-73-7	100000	5.0	U	M
40	Hexachlorobenzene	118-74-1	100000	5.0	U	M
41	Hexachlorobutadiene	87-68-3	100000	5.0	U	M
42	Hexachlorocyclopentadiene	77-47-4	100000	5.0	U	M
43	Hexachloroethane	67-72-1	100000	5.0	U	M
44	Indeno(1,2,3-c,d)pyrene	193-39-5	100000	5.0	U	M
45	Isophorone	78-59-1	100000	5.0	U	M
46	2-Methylnaphthalene	91-57-6	100000	5.0	U	M
47	4-Methylphenol	106-44-5	100000	5.0	U	M
48	2-Methylphenol	95-48-7	100000	5.0	U	M
49	N-Nitroso-di-n-propylamine	621-64-7	100000	5.0	U	M
50	N-Nitrosodiphenylamine	86-30-6	100000	5.0	U	M
51	Naphthalene	91-20-3	100000	5.0	U	M
52	4-Nitroaniline	100-01-6	250000	5.0	U	M
53	3-Nitroaniline	99-09-2	250000	5.0	U	M
54	2-Nitroaniline	88-74-4	250000	5.0	U	M
55	Nitrobenzene	98-95-3	100000	5.0	U	M
56	4-Nitrophenol	100-02-7	250000	5.0	U	M
57	2-Nitrophenol	88-75-5	100000	5.0	U	M
58	Pentachlorophenol	87-86-5	250000	5.0	U	M
59	Phenanthrene	85-01-8	100000	5.0	U	M
60	Phenol	108-95-2	100000	5.0	U	M
61	Pyrene	129-00-0	100000	5.0	U	M
62	1,2,4-Trichlorobenzene	120-82-1	100000	5.0	U	M
63	2,4,6-Trichlorophenol	88-06-2	100000	5.0	U	M
64	2,4,5-Trichlorophenol	95-95-4	250000	5.0	U	M

Laidlaw Environmental, Inc. / ENCOTEC
 3985 Research Park Drive ■ Ann Arbor, MI 48108
 Telephone: (313) 761-1389 - Telefax: (313) 761-1034

Report Date: 08/28/97

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPT-2

Date Sampled: 08/11/97
 Date Received: 08/13/97
 Date Extracted: 08/19/97
 Analysis Date: 08/23/97
 Second Analysis Date: N/A
 Method Reference: 8270
 Matrix: LIQUID, NON-AQUEOUS

ENCOTEC Project ID: 71060
 ENCOTEC SDG ID: EE-EPA-97H1
 ENCOTEC QC Set ID: BNAH2012S
 ENCOTEC Submission ID: 100005531
 ENCOTEC Sample ID: 200034471
 Percent Total Solids: N/A
 Calculation Basis: Wet Weight

	SEMIVOLATILE ORGANICS Target Compound List	CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flag
1	Acenaphthene	83-32-9	98000	10	U	
2	Acenaphthylene	208-96-8	98000	10	U	
3	Anthracene	120-12-7	98000	10	U	
4	Benzo (a) anthracene	56-55-3	98000	10	U	
5	Benzo (a) pyrene	50-32-8	98000	10	U	
6	Benzo (b) fluoranthene	205-99-2	98000	10	U	
7	Benzo (g, h, i) perylene	191-24-2	98000	10	U	
8	Benzo (k) fluoranthene	207-08-9	98000	10	U	
9	4-Bromophenyl phenyl ether	101-55-3	98000	10	U	
10	Butyl benzyl phthalate	85-68-7	98000	10	U	
11	Carbazole	86-74-8	98000	10	U	
12	4-Chloro-3-methylphenol	59-50-7	98000	10	U	
13	4-Chloroaniline	106-47-8	98000	10	U	
14	bis(2-Chloroethoxy)methane	111-91-1	98000	10	U	
15	bis(2-Chloroethyl) ether	111-44-4	98000	10	U	
16	bis(2-Chloroisopropyl) ether	108-60-1	98000	10	U	
17	2-Chloronaphthalene	91-58-7	98000	10	U	
18	2-Chlorophenol	95-57-8	98000	10	U	
19	4-Chlorophenyl phenyl ether	7005-72-3	98000	10	U	
20	Chrysene	218-01-9	98000	10	U	
21	Di-n-butyl phthalate	84-74-2	98000	10	U	
22	Di-n-octyl phthalate	117-84-0	98000	10	U	
23	Dibenz (a, h) anthracene	53-70-3	98000	10	U	
24	Dibenzofuran	132-64-9	98000	10	U	
25	1,4-Dichlorobenzene	106-46-7	98000	10	U	
26	1,3-Dichlorobenzene	541-73-1	98000	10	U	
27	1,2-Dichlorobenzene	95-50-1	98000	10	U	
28	3,3'-Dichlorobenzidine	91-94-1	98000	10	U	
29	2,4-Dichlorophenol	120-83-2	98000	10	U	
30	Diethyl phthalate	84-66-2	98000	10	U	
31	Dimethyl phthalate	131-11-3	98000	10	U	
32	2,4-Dimethylphenol	105-67-9	98000	10	U	
33	4,6-Dinitro-2-methylphenol	534-52-1	250000	10	U	
34	2,4-Dinitrophenol	51-28-5	250000	10	U	

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 Telephone: (313) 761-1389 - Telefax: (313) 761-1034

Report Date: 08/26

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPT-2

Date Sampled:	08/11/97	ENCOTEC Project ID:	71060
Date Received:	08/13/97	ENCOTEC SDG ID:	EE-EPA-97H1
Date Extracted:	08/19/97	ENCOTEC QC Set ID:	BNAH2012S
Analysis Date:	08/23/97	ENCOTEC Submission ID:	100005531
Second Analysis Date:	N/A	ENCOTEC Sample ID:	200034471
Method Reference:	8270	Percent Total Solids:	N/A
Matrix:	LIQUID, NON-AQUEOUS	Calculation Basis:	Wet Weight

	SEMIVOLATILE ORGANICS Target Compound List	CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flag
35	2,6-Dinitrotoluene	606-20-2	98000	10	U	
36	2,4-Dinitrotoluene	121-14-2	98000	10	U	
37	bis(2-Ethylhexyl) phthalate	117-81-7	98000	10	110000	
38	Fluoranthene	206-44-0	98000	10	U	
39	Fluorene	86-73-7	98000	10	U	
40	Hexachlorobenzene	118-74-1	98000	10	U	
41	Hexachlorobutadiene	87-68-3	98000	10	U	
42	Hexachlorocyclopentadiene	77-47-4	98000	10	U	
43	Hexachloroethane	67-72-1	98000	10	U	
44	Indeno(1,2,3-c,d)pyrene	193-39-5	98000	10	U	
45	Isophorone	78-59-1	98000	10	U	
46	2-Methylnaphthalene	91-57-6	98000	10	590000	
47	4-Methylphenol	106-44-5	98000	10	U	
48	2-Methylphenol	95-48-7	98000	10	U	
49	N-Nitroso-di-n-propylamine	621-64-7	98000	10	U	
50	N-Nitrosodiphenylamine	86-30-6	98000	10	U	
51	Naphthalene	91-20-3	98000	10	240000	
52	4-Nitroaniline	100-01-6	250000	10	U	
53	3-Nitroaniline	99-09-2	250000	10	U	
54	2-Nitroaniline	88-74-4	250000	10	U	
55	Nitrobenzene	98-95-3	98000	10	U	
56	4-Nitrophenol	100-02-7	250000	10	U	
57	2-Nitrophenol	88-75-5	98000	10	U	
58	Pentachlorophenol	87-86-5	250000	10	U	
59	Phenanthrene	85-01-8	98000	10	U	
60	Phenol	108-95-2	98000	10	U	
61	Pyrene	129-00-0	98000	10	U	
62	1,2,4-Trichlorobenzene	120-82-1	98000	10	U	
63	2,4,6-Trichlorophenol	88-06-2	98000	10	U	
64	2,4,5-Trichlorophenol	95-95-4	250000	10	U	

Laidlaw Environmental, Inc. / ENCOTEC
 3985 Research Park Drive ■ Ann Arbor, MI 48108
 Telephone: (313) 761-1389 - Telefax: (313) 761-1034

Report Date: 08/26/97



ecology and environment, inc.

International Specialists in the Environment

6777 Engle Road
Cleveland, Ohio 44130
Tel: (216) 243-3330, Fax: (216) 243-6923

MEMORANDUM

DATE: September 11, 1997

TO: Anne Hellie, START Project Manager, E & E, Taylor, Michigan

FROM: Brigid T. Brooks, START Chemical Engineer, E & E, Cleveland, Ohio

THROUGH: David Hendren, START Quality Assurance Officer, E & E, Chicago, Illinois

SUBJECT: Miscellaneous Analytical Data Quality Assurance Review for Flash Point and pH, Durako Paint, Detroit, Wayne County, Michigan.

REFERENCE: Project TDD: S05-9707-008 Analytical TDD: S05-9707-806
Project PAN: 7U0801SIXX Analytical PAN: 7UAF01TAXX

The data quality assurance (QA) review of eight samples, collected from the Durako Paint site, is complete. Samples were collected on August 11, 1997, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). Samples were submitted to Laidlaw Environmental, Inc. \ENCOTEC, Ann Arbor, Michigan, for analyses. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste-846 (SW-846) Methods 1010, and 9040, for the determination of flash point and pH, respectively.

Sample Identification

<u>START</u> <u>Identification No.</u>	<u>Laboratory</u> <u>Identification No.</u>
DPD1	200034462
DPD2	200034463
DPD3	200034464
DPD4	200034465
DPD5	200034466
DPD6	200034467
DPT1	200034470
DPT2	200034471

Data Qualifications

I. Holding Time: Acceptable

Samples were collected on August 11, 1997, and received by the laboratory on August 13, 1997. The samples were analyzed on August 22, 1997. The Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01 does not specify holding times for flash point and pH. Samples were collected and stored in closed glass containers, and in this reviewer's professional judgement, sample integrity was not compromised.

Durako Paint
Project TDD: S05-9707-008
Analytical TDD: S05-9707--806
pH and Flashpoint Data Quality Assurance Review
Page 2

II. Quality Control: Acceptable

Standards (p-xylene) for flash points were analyzed with the samples. The standards were within 0.2 degrees Fahrenheit (°F) of their true range of values (79.2-82.5°F). Buffers (pH 2.0, and pH 12) were analyzed prior to client samples being analyzed for pH. All pH buffers were within 0.02 standard units of each buffer's true value.

III. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on the criteria outlined in OSWER Directive 9360.4-01 (April 1990), Generic Data Validation Procedures, Section 9.0, Non-Metal Inorganic Parameters; and Section 2.7, Quality Assurance Requirements. Based upon the information provided, the data are acceptable for use as reported.

ENVIRONMENTAL CONTROL TECHNOLOGY CORPORATION
3985 Research Park Drive * Ann Arbor, MI 48108
313 / 761-1389
WASTE ANALYSIS DATA SUMMARY SHEET

Project Name: ECOLOGY & ENVIRONMENT, INC.
Project Number: 71060
Report Date: August 26, 1997

Sample I.D.: DPD-1
Sample Date: 08/11/97
Date Received: 08/13/97
ENCOTEC I.D.: 200034462

U = Analyte not detected.

ANALYTE	QC SET ID	ANALYSIS DATE	METHOD	UNITS	RESULT	REPORT LIMIT	REGULATORY LIMIT
Flashpoint	WFPH2211	08/22/97	1010	°F	<73°	73°F	140°F

¹⁾ Results of Paint Filter Test are positive or negative.

²⁾ Specific Gravity is expressed as a ratio relative to unity (density of water at 25°C).

S.U. = Standard Units.

cps = centipoise

Percent ash and halogens analyses are performed on the residue from analysis by method 5050 and its aqueous solution.

Note:

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Rev. 05/26/95

ENVIRONMENTAL CONTROL TECHNOLOGY CORPORATION
3985 Research Park Drive * Ann Arbor, MI 48108
313 / 761-1389
WASTE ANALYSIS DATA SUMMARY SHEET

Project Name: ECOLOGY & ENVIRONMENT, INC.
Project Number: 71060
Report Date: August 26, 1997

Sample I.D.: DPD-2
Sample Date: 08/11/97
Date Received: 08/13/97
ENCOTEC I.D.: 200034463

U = Analyte not detected.

ANALYTE	QC SET ID	ANALYSIS DATE	METHOD	UNITS	RESULT	REPORT LIMIT	REGULATORY LIMIT
Flashpoint	WFPH2211	08/22/97	1010	°F	<73°	73°F	140°F

" Results of Paint Filter Test are positive or negative.

" Specific Gravity is expressed as a ratio relative to unity (density of water at 25°C).

S.U. = Standard Units.

cps = centipoise

Percent ash and halogens analyses are performed on the residue from analysis by method 5050 and its aqueous solution.

Note:

Form 120WPN1G.GN6

Rev. 05/26/95

ENVIRONMENTAL CONTROL TECHNOLOGY CORPORATION
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WASTE ANALYSIS DATA SUMMARY SHEET

Project Name: ECOLOGY & ENVIRONMENT, INC.
Project Number: 71060
Report Date: August 26, 1997

Sample I.D.: DPD-3
Sample Date: 08/11/97
Date Received: 08/13/97
ENCOTEC I.D.: 200034464

U = Analyte not detected.

ANALYTE	QC SET ID	ANALYSIS DATE	METHOD	UNITS	RESULT	REPORT LIMIT	REGULATORY LIMIT
Corrosivity (as pH)	WPHH2211	08/22/97	9040	S.U.	<1.0	NA	$2 \leq \text{pH} \leq 12.5$

" Results of Paint Filter Test are positive or negative.

" Specific Gravity is expressed as a ratio relative to unity (density of water at 25°C).

S.U. = Standard Units.

cps = centipoise

Percent ash and halogens analyses are performed on the residue from analysis by method 5050 and its aqueous solution.

Note:

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Rev. 05/26/95

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WASTE ANALYSIS DATA SUMMARY SHEET

Project Name: ECOLOGY & ENVIRONMENT, INC.
Project Number: 71060
Report Date: August 26, 1997

Sample I.D.: DPD-4
Sample Date: 08/11/97
Date Received: 08/13/97
ENCOTEC I.D.: 200034465

U = Analyte not detected.

ANALYTE	QC SET ID	ANALYSIS DATE	METHOD	UNITS	RESULT	REPORT LIMIT	REGULATORY LIMIT
Flashpoint	WFPH2211	08/22/97	1010	°F	170°	73°F	140°F

" Results of Paint Filter Test are positive or negative.

" Specific Gravity is expressed as a ratio relative to unity (density of water at 25°C).

S.U. = Standard Units.

cps = centipoise

Percent ash and halogens analyses are performed on the residue from analysis by method 5050 and its aqueous solution.

Note:

Form 120WPN1G.GN6

Rev. 05/26/95

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WASTE ANALYSIS DATA SUMMARY SHEET

Project Name: ECOLOGY & ENVIRONMENT, INC.
Project Number: 71060
Report Date: August 26, 1997

Sample I.D.: DPD-5
Sample Date: 08/11/97
Date Received: 08/13/97
ENCOTEC I.D.: 200034466

U = Analyte not detected.

ANALYTE	QC SET ID	ANALYSIS DATE	METHOD	UNITS	RESULT	REPORT LIMIT	REGULATORY LIMIT
Flashpoint	WFPH2211	08/22/97	1010	°F	<73°	73°F	140°F

" Results of Paint Filter Test are positive or negative.

" Specific Gravity is expressed as a ratio relative to unity (density of water at 25°C).

S.U. = Standard Units.

cps = centipoise

Percent ash and halogens analyses are performed on the residue from analysis by method 5050 and its aqueous solution.

Note:

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Rev. 05/26/95

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3985 Research Park Drive * Ann Arbor, MI 48108
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WASTE ANALYSIS DATA SUMMARY SHEET

Project Name: ECOLOGY & ENVIRONMENT, INC.
Project Number: 71060
Report Date: August 26, 1997

Sample I.D.: DPD-6
Sample Date: 08/11/97
Date Received: 08/13/97
ENCOTEC I.D.: 200034467

U = Analyte not detected.

ANALYTE	QC SET ID	ANALYSIS DATE	METHOD	UNITS	RESULT	REPORT LIMIT	REGULATORY LIMIT
Flashpoint	WFPH2211	08/22/97	1010	°F	77°	73°F	140°F

1) Results of Paint Filter Test are positive or negative.

2) Specific Gravity is expressed as a ratio relative to unity (density of water at 25°C).

S.U. = Standard Units.

cps = centipoise

Percent ash and halogens analyses are performed on the residue from analysis by method 5050 and its aqueous solution.

Note:

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Rev. 05/26/95

ENVIRONMENTAL CONTROL TECHNOLOGY CORPORATION
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WASTE ANALYSIS DATA SUMMARY SHEET

Project Name: ECOLOGY & ENVIRONMENT, INC.
Project Number: 71060
Report Date: August 26, 1997

Sample I.D.: DPT-1
Sample Date: 08/11/97
Date Received: 08/13/97
ENCOTEC I.D.: 200034470

U = Analyte not detected.

ANALYTE	QC SET ID	ANALYSIS DATE	METHOD	UNITS	RESULT	REPORT LIMIT	REGULATORY LIMIT
Flashpoint	WFPH2211	08/22/97	1010	°F	<73°	73°F	140°F

" Results of Paint Filter Test are positive or negative.

" Specific Gravity is expressed as a ratio relative to unity (density of water at 25°C).

S.U. = Standard Units.

cps = centipoise

Percent ash and halogens analyses are performed on the residue from analysis by method 5050 and its aqueous solution.

Note:

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3985 Research Park Drive * Ann Arbor, MI 48108
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WASTE ANALYSIS DATA SUMMARY SHEET

Project Name: ECOLOGY & ENVIRONMENT, INC.
Project Number: 71060
Report Date: August 26, 1997

Sample I.D.: DPT-2
Sample Date: 08/11/97
Date Received: 08/13/97
ENCOTEC I.D.: 200034471

U = Analyte not detected.

ANALYTE	QC SET ID	ANALYSIS DATE	METHOD	UNITS	RESULT	REPORT LIMIT	REGULATORY LIMIT
Flashpoint	WFPH2211	08/22/97	1010	°F	<73°	73°F	140°F

" Results of Paint Filter Test are positive or negative.

" Specific Gravity is expressed as a ratio relative to unity (density of water at 25°C).

S.U. = Standard Units.

cps = centipoise

Percent ash and halogens analyses are performed on the residue from analysis by method 5050 and its aqueous solution.

Note:

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Rev. 05/26/95



ecology and environment, inc.

International Specialists in the Environment

6777 Engle Road

Cleveland, Ohio 44130

Tel: (216) 243-3330. Fax: (216) 243-6923

MEMORANDUM

DATE: September 11, 1997

TO: Anne Hellie, START Project Manager, E & E, Taylor, Michigan

FROM: Brigid T. Brooks, START Chemical Engineer, E & E, Cleveland, Ohio

THROUGH: David Hendren, START Quality Assurance Officer, E & E, Chicago, Illinois

SUBJECT: Toxicity Characteristic Leaching Procedure (TCLP) and Total Michigan Metals Analytical Data Quality Assurance Review, Durako Paint, Detroit, Wayne County, Michigan.

REFERENCE: Project TDD: S05-9707-008 Analytical TDD: S05-9707-806
Project PAN: 7U0801SIXX Analytical PAN: 7UAF01TAXX

The data quality assurance (QA) review of eleven samples, collected from the Durako Paint site, is complete. Samples were collected on August 11, 1997, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). Samples were submitted to Laidlaw Environmental, Inc. \ENCOTEC, Ann Arbor, Michigan, for analyses. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste-846 (SW-846) Methods 1311, 6010, and 7470 for TCLP metals and Methods 6010 and 7471 for total metals.

<u>START</u> <u>Identification No.</u>	<u>Laboratory</u> <u>Identification No.</u>
DPD1	200034462
DPD2	200034463
DPD4	200034465
DPD5	200034466
DPD6	200034467
DPF1	200034468
DPF2	200034469
DPT1	200034470
DPT2	200034471
DPF1	200034472
DPF2	200034473

Data Qualifications

I. Holding Time: Acceptable

The samples were collected on August 11, 1997, and received by the laboratory on August 13, 1997. Samples were analyzed for TCLP and total metals on August 19, 20, 21, and 25, 1997. All analyses were completed within 28 days holding time for mercury and 6 month holding time for metals as specified in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01.

II. Calibration:

A. Initial Calibration: Acceptable

Initial calibrations were within the recommended limits of 90 to 110% for metals, and 80 to 120% for mercury.

B. Continuing Calibration: Acceptable

Continuing calibration standards were analyzed and were within the recommended limit of 90 to 110% for metals, and 80 to 120% for mercury.

III. Method Blanks: Acceptable

Calibration blanks and preparation blanks were analyzed with the samples. All analyte concentrations were below instrument detection limits.

IV. Inductively Coupled Plasma (ICP) Interference Check Samples: Acceptable

All ICP interference check samples were within 20% of the mean values. An ICP interference check sample was analyzed at both the beginning and the end of the sample run.

V. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on the criteria outlined in OSWER Directive 9360.4-01 (April 1990), Data Validation Procedures; Section 3.0, Metallic Inorganic Parameters; and Section 2.7, Quality Assurance Requirements for QA Level II work. Based upon the information provided, the data are acceptable for use as reported.

ANALYTICAL REPORT

Client: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPD-1

Date Sampled	08/11/97	ENCOTEC Project ID:	71060
Date Received:	08/13/97	ENCOTEC SDG ID:	EE-EPA-97H1
Date Extracted:	N/A	ENCOTEC QC Set ID:	See below
Date Analyzed:	See below	ENCOTEC Submission ID:	100005531
Method Reference:	See below	ENCOTEC Sample ID:	200034462
Matrix:	LIQUID, NON-AQUEOUS	Analyte List:	N/A
Percent Total Solids:	N/A	Calculation Basis:	Wet Weight

	Metals Inorganics	QC Set ID	Date Analyzed	Method Ref.	Units	Quant Limit	Dil	Conc	Flag	Reg. Level (mg/L)
1	Arsenic	ICPH1905	08/20/97	6010	mg/Kg	4.0	1	U		5
2	Barium	ICPH1905	08/20/97	6010	mg/Kg	10	1	U		100
3	Cadmium	ICPH1905	08/20/97	6010	mg/Kg	0.25	1	U		1
4	Chromium	ICPH1905	08/20/97	6010	mg/Kg	2.5	1	U		5
5	Copper	ICPH1905	08/20/97	6010	mg/Kg	5.0	1	U		100
6	Lead	ICPH1905	08/20/97	6010	mg/Kg	2.0	1	U		5
7	Mercury	CVAH2003	08/21/97	7471	mg/Kg	0.040	1	U		0.2
8	Selenium	HYDH2102	08/25/97	7741	mg/Kg	0.50	1	U		1
9	Silver	ICPH1905	08/20/97	6010	mg/Kg	2.5	1	U		5
10	Zinc	ICPH1905	08/20/97	6010	mg/Kg	5.0	1	U		500

Laidlaw Environmental, Inc. / ENCOTEC

3985 Research Park Drive ■ Ann Arbor, MI 48108

Telephone: (313) 761-1389 - Telefax: (313) 761-1034

Report Date: 08/25/97

ANALYTICAL REPORT

Client: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPD-2

Date Sampled	08/11/97	ENCOTEC Project ID:	71060
Date Received:	08/13/97	ENCOTEC SDG ID:	EE-EPA-97H1
Date Extracted:	N/A	ENCOTEC QC Set ID:	See below
Date Analyzed:	See below	ENCOTEC Submission ID:	100005531
Method Reference:	See below	ENCOTEC Sample ID:	200034463
Matrix:	LIQUID, NON-AQUEOUS	Analyte List:	N/A
Percent Total Solids:	N/A	Calculation Basis:	Wet Weight

	Metals Inorganics	QC Set ID	Date Analyzed	Method Ref.	Units	Quant Limit	Dil	Conc	Flag	Reg. Level (mg/L)
	Arsenic	ICPH1905	08/20/97	6010	mg/Kg	4.0	1	U		5
	Barium	ICPH1905	08/20/97	6010	mg/Kg	10	1	U		100
3	Cadmium	ICPH1905	08/20/97	6010	mg/Kg	0.25	1	U		1
4	Chromium	ICPH1905	08/20/97	6010	mg/Kg	2.5	1	68		5
5	Copper	ICPH1905	08/20/97	6010	mg/Kg	5.0	1	U		100
6	Lead	ICPH1905	08/20/97	6010	mg/Kg	2.0	1	300		5
7	Mercury	CVAH2003	08/21/97	7471	mg/Kg	0.040	1	U		1.1
8	Selenium	HYDH2102	08/25/97	7741	mg/Kg	0.50	1	U		1
9	Silver	ICPH1905	08/20/97	6010	mg/Kg	2.5	1	U		5
10	Zinc	ICPH1905	08/20/97	6010	mg/Kg	5.0	1	63		500

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Report Date: 08/25/97

ANALYTICAL REPORT

Client: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPD-4

Date Sampled:	08/11/97	ENCOTEC Project ID:	71060
Date Received:	08/13/97	ENCOTEC SDG ID:	EE-EPA-97H1
Date Extracted:	N/A	ENCOTEC QC Set ID:	See below
Date Analyzed:	See below	ENCOTEC Submission ID:	100005531
Method Reference:	See below	ENCOTEC Sample ID:	200034465
Matrix:	LIQUID, NON-AQUEOUS	Analyte List:	N/A
Percent Total Solids:	N/A	Calculation Basis:	Wet Weight

	Metals Inorganics	QC Set ID	Date Analyzed	Method Ref.	Units	Quant Limit	Dil	Conc	Flag	Reg. Level (mg/L)
1	Arsenic	ICPH1905	08/20/97	6010	mg/Kg	4.0	1	U		5
2	Barium	ICPH1905	08/20/97	6010	mg/Kg	10	1	U		100
3	Cadmium	ICPH1905	08/20/97	6010	mg/Kg	0.25	1	U		1
4	Chromium	ICPH1905	08/20/97	6010	mg/Kg	2.5	1	U		5
5	Copper	ICPH1905	08/20/97	6010	mg/Kg	5.0	1	U		100
6	Lead	ICPH1905	08/20/97	6010	mg/Kg	2.0	1	U		5
7	Mercury	CVAH2003	08/21/97	7471	mg/Kg	0.340	1	U		0.2
8	Selenium	HYDH2102	08/25/97	7741	mg/Kg	0.50	1	U		1
9	Silver	ICPH1905	08/20/97	6010	mg/Kg	2.5	1	U		5
10	Zinc	ICPH1905	08/20/97	6010	mg/Kg	5.0	1	U		500

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Report Date: 08/25/97

ANALYTICAL REPORT

Client: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPD-5

Date Sampled: 08/11/97
 Date Received: 08/13/97
 Date Extracted: N/A
 Date Analyzed: See below
 Method Reference: See below
 Matrix: LIQUID, NON-AQUEOUS
 Percent Total Solids: N/A

ENCOTEC Project ID: 7116
 ENCOTEC SDG ID: EE-EPA-ATH1
 ENCOTEC QC Set ID: See below
 ENCOTEC Submission ID: 10000001
 ENCOTEC Sample ID: 10000001
 Analyte List: See below
 Calculation Basis: Wet Weight

	Metals Inorganics	QC Set ID	Date Analyzed	Method Ref.	Units	Quant Limit	Dil	Conc	Flag	Reg. Level (mg/L)
1	Arsenic	ICPH1905	08/20/97	6010	mg/Kg	4.0	1	U		5
2	Barium	ICPH1905	08/20/97	6010	mg/Kg	10	1	U		100
3	Cadmium	ICPH1905	08/20/97	6010	mg/Kg	0.25	1	U		1
4	Chromium	ICPH1905	08/20/97	6010	mg/Kg	2.5	1	U		5
5	Copper	ICPH1905	08/20/97	6010	mg/Kg	5.0	1	U		100
6	Lead	ICPH1905	08/20/97	6010	mg/Kg	2.0	1	U		5
7	Mercury	CVAH2202	08/22/97	7471	mg/Kg	0.20	10	U	M	0.2
8	Selenium	HYDH2102	08/25/97	7741	mg/Kg	0.50	1	U		1
9	Silver	ICPH1905	08/20/97	6010	mg/Kg	2.5	1	U		5
10	Zinc	ICPH1905	08/20/97	6010	mg/Kg	5.0	1	U		500

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Report Date: 08/25/97

ANALYTICAL REPORT

Client: ECOLOGY & ENVIRONMENT, INC.
Project/Site: EPA
Sample ID: DPD-6

Date Sampled	08/11/97	ENCOTEC Project ID:	71060
Date Received:	08/13/97	ENCOTEC SDG ID:	EE-EPA-97H1
Date Extracted:	N/A	ENCOTEC QC Set ID:	See below
Date Analyzed:	See below	ENCOTEC Submission ID:	100005531
Method Reference:	See below	ENCOTEC Sample ID:	200034467
Matrix:	LIQUID, NON-AQUEOUS	Analyte List:	N/A
Percent Total Solids:	N/A	Calculation Basis:	Wet Weight

	Metals Inorganics	QC Set ID	Date Analyzed	Method Ref.	Units	Quant Limit	Dil	Conc	Flag	Reg. Level (mg/L)
1	Arsenic	ICPH1905	08/20/97	6010	mg/Kg	4.0	1	U		5
2	Barium	ICPH1905	08/20/97	6010	mg/Kg	10	1	U		100
3	Cadmium	ICPH1905	08/20/97	6010	mg/Kg	0.25	1	U		1
4	Chromium	ICPH1905	08/20/97	6010	mg/Kg	2.5	1	8.1		5
5	Copper	ICPH1905	08/20/97	6010	mg/Kg	5.0	1	U		100
6	Lead	ICPH1905	08/20/97	6010	mg/Kg	2.0	1	100		5
7	Mercury	CVAH2003	08/21/97	7471	mg/Kg	0.040	1	0.49		0.2
8	Selenium	HYDH2102	08/25/97	7741	mg/Kg	0.50	1	U		1
9	Silver	ICPH1905	08/20/97	6010	mg/Kg	2.5	1	U		5
10	Zinc	ICPH1905	08/20/97	6010	mg/Kg	5.0	1	U		500

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Report Date: 08/25/99

ANALYTICAL REPORT

Client: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPF-1

Date Sampled	08/11/97	ENCOTEC Project ID:	71060
Date Received:	08/13/97	ENCOTEC SDG ID:	EE-EPA-97H1
Date Extracted:	N/A	ENCOTEC QC Set ID:	See below
Date Analyzed:	See below	ENCOTEC Submission ID:	100005531
Method Reference:	See below	ENCOTEC Sample ID:	200034468
Matrix:	SOLID	Analyte List:	N/A
Percent Total Solids:	N/A	Calculation Basis:	Wet Weight

	Metals Inorganics	QC Set ID	Date Analyzed	Method Ref.	Units	Quant Limit	Dil	Conc	Flag	Reg. Level (mg/L)
1	Arsenic	ICPH1905	08/20/97	6010	mg/Kg	4.0	1	U		5
2	Barium	ICPH1905	08/20/97	6010	mg/Kg	10	1	50		100
3	Cadmium	ICPH1905	08/20/97	6010	mg/Kg	0.25	1	U		1
4	Chromium	ICPH1905	08/20/97	6010	mg/Kg	2.5	1	U		5
5	Copper	ICPH1905	08/20/97	6010	mg/Kg	5.0	1	U		100
6	Lead	ICPH1905	08/20/97	6010	mg/Kg	2.0	1	4.9		5
7	Mercury	CVAH2003	08/21/97	7471	mg/Kg	0.040	1	U		0.2
8	Selenium	HYDH2102	08/25/97	7741	mg/Kg	0.50	1	U		1
9	Silver	ICPH1905	08/20/97	6010	mg/Kg	2.5	1	U		5
10	Zinc	ICPH1905	08/20/97	6010	mg/Kg	5.0	1	12		500

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 3985 Research Park Drive ■ Ann Arbor, MI 48108
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Report Date: 08/25/

ANALYTICAL REPORT

Client: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPF-2

Date Sampled	08/11/97	ENCOTEC Project ID:	71060
Date Received:	08/13/97	ENCOTEC SDG ID:	EE-EPA-97H1
Date TCLP:	08/19/97	ENCOTEC QC Set ID:	See below
Date Analyzed:	See below	ENCOTEC Submission ID:	100005531
Method Reference:	See below	ENCOTEC Sample ID:	200034473
Matrix:	TCLP EXTRACT	Analyte List:	N/A
Percent Total Solids:	N/A	Calculation Basis:	N/A

Metals Inorganics	QC Set ID	Date Analyzed	Method Ref.	Units	Quant Limit	Dil	Conc	Flag	Reg. Level (mg/L)
1 Arsenic	ICPH2101	08/21/97	6010	mg/L	0.50	1	U		5
2 Barium	ICPH2101	08/21/97	6010	mg/L	5.0	1	U		100
3 Cadmium	ICPH2101	08/21/97	6010	mg/L	0.040	1	U		1
4 Chromium	ICPH2101	08/21/97	6010	mg/L	0.050	1	U		5
5 Copper	ICPH2101	08/21/97	6010	mg/L	5.0	1	U		100
6 Lead	ICPH2101	08/21/97	6010	mg/L	0.10	1	0.14		5
7 Mercury	CVAH2103	08/22/97	7470	mg/L	0.0020	1	U		0.2
8 Selenium	ICPH2101	08/21/97	6010	mg/L	0.10	1	U		1
9 Silver	ICPH2101	08/21/97	6010	mg/L	0.050	1	U		5
0 Zinc	ICPH2101	08/21/97	6010	mg/L	5.0	1	U		100

Laidlaw Environmental, Inc. - ENCOTEC
 985 Research Park Drive ■ Ann Arbor, MI 48108
 Telephone: 313-761-1359 • Telefax: 313-761-1034

Report Date: 08/25/97

ANALYTICAL REPORT

Client: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPT-1

Date Sampled	08/11/97	ENCOTEC Project ID:	71060
Date Received:	08/13/97	ENCOTEC SDG ID:	EE-EPA-97H1
Date Extracted:	N/A	ENCOTEC QC Set ID:	See below
Date Analyzed:	See below	ENCOTEC Submission ID:	100005531
Method Reference:	See below	ENCOTEC Sample ID:	200034470
Matrix:	LIQUID, NON-AQUEOUS	Analyte List:	N/A
Percent Total Solids:	N/A	Calculation Basis:	Wet Weight

	Metals Inorganics	QC Set ID	Date Analyzed	Method Ref.	Units	Quant Limit	Dil	Conc	Flag	Reg. Level (mg/L)
1	Arsenic	ICPH1905	08/20/97	6010	mg/Kg	4.0	1	U		5
2	Barium	ICPH1905	08/20/97	6010	mg/Kg	10	1	U		100
3	Cadmium	ICPH1905	08/20/97	6010	mg/Kg	0.25	1	U		1
4	Chromium	ICPH1905	08/20/97	6010	mg/Kg	2.5	1	U		5
5	Copper	ICPH1905	08/20/97	6010	mg/Kg	5.0	1	U		100
6	Lead	ICPH1905	08/20/97	6010	mg/Kg	2.0	1	U		5
7	Mercury	CVAH2003	08/21/97	7471	mg/Kg	0.040	1	U		0.2
8	Selenium	HYDH2102	08/25/97	7741	mg/Kg	0.50	1	U		1
9	Silver	ICPH1905	08/20/97	6010	mg/Kg	2.5	1	U		5
10	Zinc	ICPH1905	08/20/97	6010	mg/Kg	5.0	1	U		500

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 1985 Research Park Drive ■ Ann Arbor, MI 48108
 Telephone: (313) 761-1389 • Telefax: (313) 761-1034

Report Date: 08/25

ANALYTICAL REPORT

Client: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPT-2

Date Sampled	08/11/97	ENCOTEC Project ID:	71060
Date Received:	08/13/97	ENCOTEC SDG ID:	EE-EPA-97H1
Date Extracted:	N/A	ENCOTEC QC Set ID:	See below
Date Analyzed:	See below	ENCOTEC Submission ID:	100005531
Method Reference:	See below	ENCOTEC Sample ID:	200034471
Matrix:	LIQUID, NON-AQUEOUS	Analyte List:	N/A
Percent Total Solids:	N/A	Calculation Basis:	Wet Weight

Metals Inorganics	QC Set ID	Date Analyzed	Method Ref.	Units	Quant Limit	Dil	Conc	Flag	Rcg. Level (mg/L)
1 Arsenic	ICPH1905	08/19/97	6010	mg/Kg	4.0	1	U		5
2 Barium	ICPH1905	08/19/97	6010	mg/Kg	10	1	U		100
3 Cadmium	ICPH1905	08/19/97	6010	mg/Kg	0.25	1	U		1
4 Chromium	ICPH1905	08/19/97	6010	mg/Kg	2.5	1	U		5
5 Copper	ICPH1905	08/20/97	6010	mg/Kg	5.0	1	U		100
6 Lead	ICPH1905	08/20/97	6010	mg/Kg	2.0	1	4.8		5
7 Mercury	CVAH2003	08/21/97	7471	mg/Kg	0.040	1	0.44		0.2
8 Selenium	HYDH2102	08/25/97	7741	mg/Kg	0.50	1	U		1
9 Silver	ICPH1905	08/20/97	6010	mg/Kg	2.5	1	U		5
10 Zinc	ICPH1905	08/19/97	6010	mg/Kg	5.0	1	5.5		500

Laidlaw Environmental, Inc. / ENCOTEC

3985 Research Park Drive ■ Ann Arbor, MI 48108

Telephone: (313) 761-1389 • Telefax: (313) 761-1034

Report Date: 08/25



ecology and environment, inc.

International Specialists in the Environment

6777 Engle Road
Cleveland, Ohio 44130
Tel. (216) 241-8380, Fax (216) 241-4922

MEMORANDUM

DATE: September 11, 1997

TO: Anne Hellie, START Project Manager, E & E, Taylor, Michigan

FROM: Brigid T. Brooks, START Chemical Engineer, E & E, Cleveland, Ohio

THROUGH: David Hendren, START Quality Assurance Officer, E & E, Chicago, Illinois

SUBJECT: Volatile Organic Compound (VOC) Analytical Data Quality Assurance Review, Durako Paint, Detroit, Wayne County, Michigan.

REFERENCE: Project TDD: S05-9707-008 Analytical TDD: S05-9707-400
Project PAN: 7U0801SIXX Analytical PAN: 7UAF01TXXX

The data quality assurance (QA) review of seven samples, collected from the Durako Paint site, is complete. Samples were collected on August 11, 1997, by the Superfund Technical Assessment and Response Team (START) contractor, Ecology and Environment, Inc. (E & E). Samples were submitted to Laidlaw Environmental, Inc./ENCOTEC, Ann Arbor, Michigan, for analyses. The laboratory analyses were performed according to the United States Environmental Protection Agency (U.S. EPA) Solid Waste-846 (SW-846) Method 8260 for the determination of VOCs.

Sample Identification

<u>START Identification No.</u>	<u>Laboratory Identification No.</u>
DFD1	200034462
DFD2	200034463
DPD4	200034465
DPD5	200034466
DPD6	200034467
DPT1	200034470
DPT2	200034471

Data Qualifications

I. Holding Time: Acceptable

Samples were collected on August 11, 1997, and received by the laboratory on August 13, 1997. Samples were analyzed on August 13, 1997 for VOCs. Analyses were completed within the 14 days holding time specified in the Office of Solid Waste and Emergency Response (OSWER) Directive 9360.4-01.

II. Gas Chromatography-Mass Spectrometry (GC/MS) Tuning: Acceptable

A bromofluorobenzene (BFB) performance standard was analyzed within the 12-hour time limit on the same instrument used to analyze the samples, and ion abundance criteria were met.

III. Calibration:

A. Initial Calibration: Acceptable

All response factors (RFs) were greater than zero, and relative response factors (RRFs) for all parameters were at least 0.05 for the initial calibration. The percent relative standard deviations (%RSDs) were within the acceptable range of less than or equal to 30% for all detected VOCs.

B. Continuing Calibration: Acceptable

All percent differences (%Ds) between the initial calibration and continuing calibration were within the recommended limits of less than or equal to 25%, for all detected compounds.

IV. Internal Standards: Qualified

All internal standard (IS) areas were within the specified limits (-50 to +100%) of the associated calibration standards, except chlorobenzene-d5 for sample DPD5. All associated positive results for sample DPD5 were flagged "J", as estimated. IS retention times (RTs) were within the plus-or-minus 30-second control limit.

V. Method Blank: Acceptable

A method blank was analyzed on the same instrument at the proper frequency. All target analytes were below the instrument detection limits.

VI. Compound Identification: Acceptable

All relative retention times (RRTs) were within 0.06 units of the standard RRTs. A comparison of the mass spectra obtained from the target compounds agreed with those of the standards.

VII. Compound Quantitation and Reported Detection Limits: Acceptable

All reported values have been correctly adjusted to reflect all dilutions.

VIII. Overall Assessment of Data for Use: Acceptable

The overall usefulness of the data is based on the criteria outlined in OSWER Directive 9360.4-01 (April 1990), Data Validation Procedures; Section 5.0, Volatiles by GC/MS Analysis; and Section 2.7, Quality Assurance Requirements. Based upon the information provided, the data is acceptable for use as reported with the above stated qualifier.

Data Qualifiers and Definitions

- J The associated numerical value is an estimated quantity because the reported concentrations were less than the required detection limits or quality control criteria were not met.

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPD-1

Date Sampled: 08/11/97
 Date Received: 08/13/97
 Date Extracted: N/A
 Analysis Date: 08/22/97
 Second Analysis Date: N/A
 Method Reference: 8260
 Matrix: LIQUID, NON-AQUEOUS

ENCOTEC Project ID: 71060
 ENCOTEC SDG ID: EE-EPA-97H1
 ENCOTEC QC Set ID: VOOH2102M
 ENCOTEC Submission ID: 100005531
 ENCOTEC Sample ID: 200034460
 Percent Total Solids: N/A
 Calculation Basis: Wet Weight

	VOLATILE ORGANICS Target Compound List	CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flu
1	Acetone	67-64-1	5000	500	99000	
2	Benzene	71-43-2	2500	500	U	
3	Bromodichloromethane	75-27-4	2500	500	U	
4	Bromoform	75-25-2	2500	500	U	
5	Bromomethane	74-83-9	2500	500	U	
6	2-Butanone (MEK)	78-93-3	5000	500	8600000	
7	Carbon disulfide	75-15-0	2500	500	U	
8	Carbon tetrachloride	56-23-5	2500	500	U	
9	Chlorobenzene	108-90-7	2500	500	U	
10	Chloroethane	75-00-3	2500	500	U	
11	Chloroform	67-66-3	2500	500	U	
12	Chloromethane	74-87-3	2500	500	U	
13	Dibromochloromethane	124-48-1	2500	500	U	
14	1,4-Dichlorobenzene	106-46-7	2500	500	U	
15	1,3-Dichlorobenzene	541-73-1	2500	500	U	
16	1,2-Dichlorobenzene	95-50-1	2500	500	U	
17	1,2-Dichloroethane	107-06-2	2500	500	U	
18	1,1-Dichloroethane	75-34-3	2500	500	U	
19	total 1,2-Dichloroethene	540-59-0	2500	500	U	
20	1,1-Dichloroethene	75-35-4	2500	500	U	
21	1,2-Dichloropropane	78-87-5	2500	500	8600	
22	trans-1,3-Dichloropropene	10061-02-6	2500	500	U	
23	cis-1,3-Dichloropropene	10061-01-5	2500	500	U	
24	Ethylbenzene	100-41-4	2500	500	1E7	
25	2-Hexanone	591-78-6	5000	500	1E7	
26	4-Methyl-2-pentanone (MIBK)	108-10-1	5000	500	1400000	
27	Methylene chloride	75-09-2	2500	500	U	
28	Styrene	100-42-5	2500	500	U	
29	1,1,1,2-Tetrachloroethane	79-34-5	2500	500	U	
30	Tetrachloroethene	127-18-4	2500	500	U	
31	Toluene	108-88-3	2500	500	2300000	
32	1,1,1-Trichloroethane	71-55-6	2500	500	U	
33	1,1,2-Trichloroethane	79-00-5	2500	500	U	
34	Trichloroethene	79-01-6	2500	500	U	

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 3985 Research Park Drive ■ Ann Arbor, MI 48108
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Report Date: 98

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPD-1

Date Sampled:	08/11/97	ENCOTEC Project ID:	71060
Date Received:	08/13/97	ENCOTEC SDG ID:	EE-EPA-97H1
Date Extracted:	N/A	ENCOTEC QC Set ID:	VOCH2102M
Analysis Date:	08/22/97	ENCOTEC Submission ID:	100005531
Second Analysis Date:	N/A	ENCOTEC Sample ID:	200034462
Method Reference:	8260	Percent Total Solids:	N/A
Matrix:	LIQUID, NON-AQUEOUS	Calculation Basis:	Wet Weight

VOLATILE ORGANICS Target Compound List		CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flag
5	Vinyl chloride	75-01-4	2500	500	U	
6	total Xylenes	1330-20-7	2500	500	2900000	E

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPD-2

Date Sampled: 08/11/97
 Date Received: 08/13/97
 Date Extracted: N/A
 Analysis Date: 08/22/97
 Second Analysis Date: N/A
 Method Reference: 8260
 Matrix: LIQUID, NON-AQUEOUS

ENCOTEC Project ID: 71060
 ENCOTEC SDG ID: EE-EPA-97H1
 ENCOTEC QC Set ID: VOOH2102M
 ENCOTEC Submission ID: 100005531
 ENCOTEC Sample ID: 200034463
 Percent Total Solids: N/A
 Calculation Basis: Wet Weight

	VOLATILE ORGANICS Target Compound List	CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Fla:
1	Acetone	67-64-1	5000	500	130000	
2	Benzene	71-43-2	2500	500	U	
3	Bromodichloromethane	75-27-4	2500	500	U	
4	Bromoform	75-25-2	2500	500	U	
5	Bromomethane	74-83-9	2500	500	U	
6	2-Butanone (MEK)	78-93-3	5000	500	580000	E
7	Carbon disulfide	75-15-0	2500	500	U	
8	Carbon tetrachloride	56-23-5	2500	500	U	
9	Chlorobenzene	108-90-7	2500	500	U	
10	Chloroethane	75-00-3	2500	500	U	
11	Chloroform	67-66-3	2500	500	U	
12	Chloromethane	74-87-3	2500	500	U	
13	Dibromochloromethane	124-48-1	2500	500	U	
14	1,4-Dichlorobenzene	106-46-7	2500	500	U	
15	1,3-Dichlorobenzene	541-73-1	2500	500	U	
16	1,2-Dichlorobenzene	95-50-1	2500	500	U	
17	1,2-Dichloroethane	107-06-2	2500	500	U	
18	1,1-Dichloroethane	75-34-3	2500	500	U	
19	total 1,2-Dichloroethene	540-59-0	2500	500	U	
20	1,1-Dichloroethene	75-35-4	2500	500	U	
21	1,2-Dichloropropane	78-87-5	2500	500	U	
22	trans-1,3-Dichloropropene	10061-02-6	2500	500	U	
23	cis-1,3-Dichloropropene	10061-01-5	2500	500	U	
24	Ethylbenzene	100-41-4	2500	500	U	
25	2-Hexanone	591-78-6	5000	500	U	
26	4-Methyl-2-pentanone (MIBK)	108-10-1	5000	500	U	
27	Methylene chloride	75-09-2	2500	500	U	
28	Styrene	100-42-5	2500	500	190000	F
29	1,1,2,2-Tetrachloroethane	79-34-5	2500	500	U	
30	Tetrachloroethene	127-18-4	2500	500	U	
31	Toluene	108-88-3	2500	500	1E7	
32	1,1,1-Trichloroethane	71-55-6	2500	500	U	
33	1,1,2-Trichloroethane	79-00-5	2500	500	U	
34	Trichloroethene	79-01-6	2500	500	U	

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Report Date: 08/22/97

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPD-2

Date Sampled:	08/11/97
Date Received:	08/13/97
Date Extracted:	N/A
Analysis Date:	08/22/97
Second Analysis Date:	N/A
Method Reference:	8260
Matrix:	LIQUID, NON-AQUEOUS

ENCOTEC Project ID:	71060
ENCOTEC SDG ID:	EE-EPA-97H1
ENCOTEC QC Set ID:	VOOH2102M
ENCOTEC Submission ID:	100005531
ENCOTEC Sample ID:	200034463
Percent Total Solids:	N/A
Calculation Basis:	Wet Weight

VOLATILE ORGANICS Target Compound List		CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Fla
35	Vinyl chloride	75-01-4	2500	500	U	
36	total Xylenes	1330-20-7	2500	500	47000	

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Report Date: 08:2

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPD-4

Date Sampled: 08/11/97
 Date Received: 08/13/97
 Date Extracted: N/A
 Analysis Date: 08/22/97
 Second Analysis Date: N/A
 Method Reference: 8260
 Matrix: LIQUID, NON-AQUEOUS

ENCOTEC Project ID: 71060
 ENCOTEC SDG ID: EE-EPA-97H1
 ENCOTEC QC Set ID: VCOH2102M
 ENCOTEC Submission ID: 100005531
 ENCOTEC Sample ID: 200034465
 Percent Total Solids: N/A
 Calculation Basis: Wet Weight

	VOLATILE ORGANICS Target Compound List	CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Fla
1	Acetone	67-64-1	1000	100	4800	
2	Benzene	71-43-2	500	100	U	
3	Bromodichloromethane	75-27-4	500	100	U	
4	Bromoform	75-25-2	500	100	U	
5	Bromomethane	74-83-9	500	100	U	
6	2-Butanone (MEK)	78-93-3	1000	100	U	
7	Carbon disulfide	75-15-0	500	100	U	
8	Carbon tetrachloride	56-23-5	500	100	U	
9	Chlorobenzene	108-90-7	500	100	U	
10	Chloroethane	78-00-3	500	100	U	
11	Chloroform	67-66-3	500	100	U	
12	Chloromethane	74-87-3	500	100	U	
13	Dibromochloromethane	124-48-1	500	100	U	
14	1,4-Dichlorobenzene	106-46-7	500	100	U	
15	1,3-Dichlorobenzene	541-73-1	500	100	U	
16	1,2-Dichlorobenzene	95-50-1	500	100	U	
17	1,2-Dichloroethane	107-06-2	500	100	U	
18	1,1-Dichloroethane	75-34-3	500	100	U	
19	total 1,2-Dichloroethene	540-59-0	500	100	U	
20	1,1-Dichloroethene	75-35-4	500	100	U	
21	1,2-Dichloropropane	78-87-5	500	100	U	
22	trans-1,3-Dichloropropene	10061-02-5	500	100	U	
23	cis-1,3-Dichloropropene	10061-01-5	500	100	U	
24	Ethylbenzene	100-41-4	500	100	11000	
25	2-Hexanone	591-78-6	1000	100	U	
26	4-Methyl-2-pentanone (MIBK)	108-10-1	1000	100	U	
27	Methylene chloride	75-09-2	500	100	U	
28	Styrene	100-42-5	500	100	U	
29	1,1,2,2-Tetrachloroethane	79-34-5	500	100	U	
30	Tetrachloroethene	127-18-4	500	100	U	
31	Toluene	108-88-3	500	100	1900	
32	1,1,1-Trichloroethane	71-55-6	500	100	U	
33	1,1,2-Trichloroethane	79-00-6	500	100	U	
34	Trichloroethene	79-01-6	500	100	U	

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 5955 Research Park Drive ■ Ann Arbor, MI 48106
 Telephone: (313) 761-1339 • Telefax: (313) 761-1334

Report Date: 08-2

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPD-4

Date Sampled:	08/11/97
Date Received:	08/13/97
Date Extracted:	N/A
Analysis Date:	08/22/97
Second Analysis Date:	N/A
Method Reference:	8260
Matrix:	LIQUID, NON-AQUEOUS

ENCOTEC Project ID:	71060
ENCOTEC SDG ID:	EE-EPA-97H1
ENCOTEC QC Set ID:	VOOH2102M
ENCOTEC Submission ID:	100005531
ENCOTEC Sample ID:	200034463
Percent Total Solids:	N/A
Calculation Basis:	Wet Weight

VOLATILE ORGANICS Target Compound List		CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flag
35	Vinyl chloride	75-01-4	500	100	U	
36	total Xylenes	1330-20-7	500	100	56000	E

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Report Date: 05-27

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPD-5

Date Sampled:	08/11/97	ENCOTEC Project ID:	71060
Date Received:	08/13/97	ENCOTEC SDG ID:	EE-EPA-97H1
Date Extracted:	N/A	ENCOTEC QC Set ID:	VOOH2102M
Analysis Date:	08/22/97	ENCOTEC Submission ID:	100005531
Second Analysis Date:	N/A	ENCOTEC Sample ID:	200034466
Method Reference:	8260	Percent Total Solids:	N/A
Matrix:	LIQUID, NON-AQUEOUS	Calculation Basis:	Wet Weight

	VOLATILE ORGANICS Target Compound List	CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flu
1	Acetone	67-64-1	5000	500	46000	
2	Benzene	71-43-2	2500	500	3900	
3	Bromodichloromethane	75-27-4	2500	500	U	
4	Bromoform	75-25-2	2500	500	U	
5	Bromomethane	74-83-9	2500	500	U	
6	2-Butanone (MEK)	78-93-3	5000	500	470000	E
7	Carbon disulfide	75-15-0	2500	500	U	
8	Carbon tetrachloride	56-23-5	2500	500	U	
9	Chlorobenzene	108-90-7	2500	500	U	
10	Chloroethane	75-00-3	2500	500	U	
11	Chloroform	67-66-3	2500	500	U	
12	Chloromethane	74-87-3	2500	500	U	
13	Dibromochloromethane	124-48-1	2500	500	U	
14	1,4-Dichlorobenzene	106-46-7	2500	500	U	
15	1,3-Dichlorobenzene	541-73-1	2500	500	U	
16	1,2-Dichlorobenzene	95-50-1	2500	500	U	
17	1,2-Dichloroethane	107-06-2	2500	500	U	
18	1,1-Dichloroethane	75-34-3	2500	500	U	
19	total 1,2-Dichloroethene	540-59-0	2500	500	U	
20	1,1-Dichloroethene	75-35-4	2500	500	U	
21	1,2-Dichloropropane	78-87-5	2500	500	22000	
22	trans-1,3-Dichloropropene	10061-02-6	2500	500	U	
23	cis-1,3-Dichloropropene	10061-01-5	2500	500	U	
24	Ethylbenzene	100-41-4	2500	500	U	
25	2-Hexanone	591-78-6	5000	500	U	
26	4-Methyl-2-pentanone (MIBK)	108-10-1	5000	500	4000000	E
27	Methylene chloride	75-09-2	2500	500	10000	E
28	Styrene	100-42-5	2500	500	U	
29	1,1,2,2-Tetrachloroethane	79-34-5	2500	500	U	
30	Tetrachloroethene	127-18-4	2500	500	3900	
31	Toluene	108-88-3	2500	500	2700000	E
32	1,1,1-Trichloroethane	71-55-6	2500	500	U	
33	1,1,2-Trichloroethane	79-00-5	2500	500	U	
34	Trichloroethene	79-01-6	2500	500	3300	

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Report Date: 05 27

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPD-5

Date Sampled:	08/11/97
Date Received:	08/13/97
Date Extracted:	N/A
Analysis Date:	08/22/97
Second Analysis Date:	N/A
Method Reference:	8260
Matrix:	LIQUID, NON-AQUEOUS

ENCOTEC Project ID:	71060
ENCOTEC SDG ID:	EE-EPA-97H1
ENCOTEC QC Set ID:	VOOH2102M
ENCOTEC Submission ID:	100005531
ENCOTEC Sample ID:	200034466
Percent Total Solids:	N/A
Calculation Basis:	Wet Weight

VOLATILE ORGANICS Target Compound List		CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flag
35	Vinyl chloride	75-01-4	2500	500	U	
36	total Xylenes	1330-20-7	2500	500	2E7	E

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Report Date: 08.27

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPD-6

Date Sampled: 08/11/97
 Date Received: 08/13/97
 Date Extracted: N/A
 Analysis Date: 08/22/97
 Second Analysis Date: N/A
 Method Reference: 8260
 Matrix: LIQUID, NON-AQUEOUS

ENCOTEC Project ID: 71060
 ENCOTEC SDG ID: EE-EPA-97H1
 ENCOTEC QC Set ID: VOOH2102M
 ENCOTEC Submission ID: 100005531
 ENCOTEC Sample ID: 200034467
 Percent Total Solids: N/A
 Calculation Basis: Wet Weight

	VOLATILE ORGANICS Target Compound List	CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Fl.
1	Acetone	67-64-1	5000	500	22000	
2	Benzene	71-43-2	2500	500	U	
3	Bromodichloromethane	75-27-4	2500	500	U	
4	Bromoform	75-25-2	2500	500	U	
5	Bromomethane	74-83-9	2500	500	U	
6	2-Butanone (MEK)	78-93-3	5000	500	280000	E
7	Carbon disulfide	75-15-0	2500	500	U	
8	Carbon tetrachloride	56-23-5	2500	500	U	
9	Chlorobenzene	108-90-7	2500	500	U	
10	Chloroethane	75-00-3	2500	500	U	
11	Chloroform	67-66-3	2500	500	U	
12	Chloromethane	74-87-3	2500	500	U	
13	Dibromochloromethane	124-48-1	2500	500	U	
14	1,4-Dichlorobenzene	106-46-7	2500	500	U	
15	1,3-Dichlorobenzene	541-73-1	2500	500	U	
16	1,2-Dichlorobenzene	95-50-1	2500	500	U	
17	1,2-Dichloroethane	107-06-2	2500	500	U	
18	1,1-Dichloroethane	75-34-3	2500	500	U	
19	total 1,2-Dichloroethene	540-59-0	2500	500	U	
20	1,1-Dichloroethene	75-35-4	2500	500	U	
21	1,2-Dichloropropane	78-87-5	2500	500	9000	
22	trans-1,3-Dichloropropene	10061-02-6	2500	500	U	
23	cis-1,3-Dichloropropene	10061-01-5	2500	500	U	
24	Ethylbenzene	100-41-4	2500	500	1200000	
25	2-Hexanone	591-78-6	5000	500	U	
26	4-Methyl-2-pentanone (MIBK)	108-10-1	5000	500	130000	
27	Methylene chloride	75-09-2	2500	500	U	
28	Styrene	100-42-5	2500	500	U	
29	1,1,2,2-Tetrachloroethane	79-34-5	2500	500	U	
30	Tetrachloroethene	127-18-4	2500	500	U	
31	Toluene	108-38-3	2500	500	480000	
32	1,1,1-Trichloroethane	71-55-5	2500	500	U	
33	1,1,2-Trichloroethane	79-00-5	2500	500	U	
34	Trichloroethene	79-01-5	2500	500	U	

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Report Date: 08

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPD-6

Date Sampled: 08/11/97
Date Received: 08/13/97
Date Extracted: N/A
Analysis Date: 08/22/97
Second Analysis Date: N/A
Method Reference: 8260
Matrix: LIQUID, NON-AQUEOUS

ENCOTEC Project ID: 71060
ENCOTEC SDG ID: EE-EPA-97H1
ENCOTEC QC Set ID: VOOH2102M
ENCOTEC Submission ID: 100005531
ENCOTEC Sample ID: 200034467
Percent Total Solids: N/A
Calculation Basis: Wet Weight

VOLATILE ORGANICS Target Compound List		CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flag
35	Vinyl chloride	75-01-4	2500	500	U	
6	total Xylenes	1330-20-7	2500	500	2600000	E

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Report Date: 08/27

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPT-1

Date Sampled:	08/11/97	ENCOTEC Project ID:	71060
Date Received:	08/13/97	ENCOTEC SDG ID:	EE-EPA-97H1
Date Extracted:	N/A	ENCOTEC QC Set ID:	VOOH2102M
Analysis Date:	08/22/97	ENCOTEC Submission ID:	100005531
Second Analysis Date:	N/A	ENCOTEC Sample ID:	200034470
Method Reference:	8260	Percent Total Solids:	N/A
Matrix:	LIQUID, NON-AQUEOUS	Calculation Basis:	Wet Weight

	VOLATILE ORGANICS Target Compound List	CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flar
1	Acetone	67-64-1	1000	100	U	
2	Benzene	71-43-2	500	100	U	
3	Bromodichloromethane	75-27-4	500	100	U	
4	Bromoform	75-25-2	500	100	U	
5	Bromomethane	74-83-9	500	100	U	
6	2-Butanone (MEK)	78-93-3	1000	100	1100	
7	Carbon disulfide	75-15-0	500	100	U	
8	Carbon tetrachloride	56-23-5	500	100	U	
9	Chlorobenzene	108-90-7	500	100	U	
10	Chloroethane	75-00-3	500	100	U	
11	Chloroform	67-66-3	500	100	U	
12	Chloromethane	74-87-3	500	100	U	
13	Dibromochloromethane	124-48-1	500	100	U	
14	1,4-Dichlorobenzene	106-46-7	500	100	U	
15	1,3-Dichlorobenzene	541-73-1	500	100	U	
16	1,2-Dichlorobenzene	95-50-1	500	100	U	
17	1,2-Dichloroethane	107-06-2	500	100	U	
18	1,1-Dichloroethane	75-34-3	500	100	U	
19	total 1,2-Dichloroethene	540-59-0	500	100	U	
20	1,1-Dichloroethene	75-35-4	500	100	U	
21	1,2-Dichloropropane	78-87-5	500	100	1200	
22	trans-1,3-Dichloropropene	10061-02-6	500	100	U	
23	cis-1,3-Dichloropropene	10061-01-5	500	100	U	
24	Ethylbenzene	100-41-4	500	100	710000	E
25	2-Hexanone	591-78-6	1000	100	U	
26	4-Methyl-2-pentanone (MIBK)	108-10-1	1000	100	U	
27	Methylene chloride	75-09-2	500	100	570	K
28	Styrene	100-42-5	500	100	U	
29	1,1,2,2-Tetrachloroethane	79-34-5	500	100	U	
30	Tetrachloroethene	127-18-4	500	100	U	
31	Toluene	108-88-3	500	100	190000	E
32	1,1,1-Trichloroethane	71-55-6	500	100	U	
33	1,1,2-Trichloroethane	79-00-5	500	100	U	
34	Trichloroethene	79-01-6	500	100	U	

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Report Date: 08/27

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPT-1

Date Sampled:	08/11/97	ENCOTEC Project ID:	71060
Date Received:	08/13/97	ENCOTEC SDG ID:	EE-EPA-97H1
Date Extracted:	N/A	ENCOTEC QC Set ID:	VOOH2102M
Analysis Date:	08/22/97	ENCOTEC Submission ID:	100005531
Second Analysis Date:	N/A	ENCOTEC Sample ID:	200034470
Method Reference:	8260	Percent Total Solids:	N/A
Matrix:	LIQUID, NON-AQUEOUS	Calculation Basis:	Wet Weight

VOLATILE ORGANICS Target Compound List		CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Flag
35	Vinyl chloride	75-01-4	500	100	U	
36	total Xylenes	1330-20-7	500	100	1500000	E

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Report Date: 08/27

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPT-2

Date Sampled:	08/11/97	ENCOTEC Project ID:	71060
Date Received:	08/13/97	ENCOTEC SDG ID:	EE-EPA-97H1
Date Extracted:	N/A	ENCOTEC QC Set ID:	VOOH2102M
Analysis Date:	08/22/97	ENCOTEC Submission ID:	100005531
Second Analysis Date:	N/A	ENCOTEC Sample ID:	200034471
Method Reference:	8260	Percent Total Solids:	N/A
Matrix:	LIQUID, NON-AQUEOUS	Calculation Basis:	Wet Weight

	VOLATILE ORGANICS Target Compound List	CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Fla
1	Acetone	67-64-1	5000	500	120000	
2	Benzene	71-43-2	2500	500	5000	
3	Bromodichloromethane	75-27-4	2500	500	U	
4	Bromoform	75-25-2	2500	500	U	
5	Bromomethane	74-83-9	2500	500	U	
6	2-Butanone (MEK)	78-93-3	5000	500	830000	E
7	Carbon disulfide	75-15-0	2500	500	U	
8	Carbon tetrachloride	56-23-5	2500	500	U	
9	Chlorobenzene	108-90-7	2500	500	U	
10	Chloroethane	75-00-3	2500	500	U	
11	Chloroform	67-66-3	2500	500	U	
12	Chloromethane	74-87-3	2500	500	U	
13	Dibromochloromethane	124-48-1	2500	500	U	
14	1,4-Dichlorobenzene	106-46-7	2500	500	U	
15	1,3-Dichlorobenzene	541-73-1	2500	500	U	
16	1,2-Dichlorobenzene	95-50-1	2500	500	U	
17	1,2-Dichloroethane	107-06-2	2500	500	U	
18	1,1-Dichloroethane	75-34-3	2500	500	U	
19	total 1,2-Dichloroethene	540-59-0	2500	500	U	
20	1,1-Dichloroethene	75-35-4	2500	500	U	
21	1,2-Dichloropropane	78-87-5	2500	500	9100	
22	trans-1,3-Dichloropropene	10061-02-6	2500	500	U	
23	cis-1,3-Dichloropropene	10061-01-5	2500	500	U	
24	Ethylbenzene	100-41-4	2500	500	4000000	E
25	2-Hexanone	591-78-6	5000	500	U	
26	4-Methyl-2-pentanone (MIBK)	108-10-1	5000	500	1800000	E
27	Methylene chloride	75-09-2	2500	500	4800	K
28	Styrene	100-42-5	2500	500	U	
29	1,1,2,2-Tetrachloroethane	79-34-5	2500	500	U	
30	Tetrachloroethene	127-18-4	2500	500	6000	
31	Toluene	108-88-3	2500	500	4300000	E
32	1,1,1-Trichloroethane	71-55-6	2500	500	U	
33	1,1,2-Trichloroethane	79-00-5	2500	500	U	
34	Trichloroethene	79-01-6	2500	500	7200	

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Report Date: 08/2

ANALYTICAL REPORT

CLIENT: ECOLOGY & ENVIRONMENT, INC.

Project/Site: EPA

Sample ID: DPT-2

Date Sampled: 08/11/97
Date Received: 08/13/97
Date Extracted: N/A
Analysis Date: 08/22/97
Second Analysis Date: N/A
Method Reference: 8260
Matrix: LIQUID, NON-AQUEOUS

ENCOTEC Project ID: 71060
ENCOTEC SDG ID: EE-EPA-97H1
ENCOTEC QC Set ID: VOOH2102M
ENCOTEC Submission ID: 100005531
ENCOTEC Sample ID: 200034471
Percent Total Solids: N/A
Calculation Basis: Wet Weight

VOLATILE ORGANICS Target Compound List		CAS #	Quant Limit (ug/Kg)	Dil	Conc (ug/Kg)	Fla
35	Vinyl chloride	75-01-4	2500	500	U	
36	total Xylenes	1330-20-7	2500	500	8000000	E

Laidlaw Environmental, Inc. / ENCOTEC
3985 Research Park Drive ■ Ann Arbor, MI 48108
Telephone: (313) 761-1389 - Telefax: (313) 761-1034

Report Date: 08/2